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FILE LAST UPDATED: 5 Jan 2001 (20010105/ED)

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=> d que 120; d que 122; d que 126; d que 127; s 120 or 122 or 126 or 127; fil wpids; d que 151 ; d que 152; s 151 or 152

L1	1551	SEA FILE=CAPLUS ABB=ON	ANALYTICAL APPARATUS/CT
L3	344279	SEA FILE=CAPLUS ABB=ON	METAL#/CW
L5	5111	SEA FILE=CAPLUS ABB=ON	MAGNETIC MATERIALS/CT
L12	5943	SEA FILE=CAPLUS ABB=ON	CAMERA#/OBI
L13	72297	SEA FILE=CAPLUS ABB=ON	PRECIPITAT#/OBI
L15	1547	SEA FILE=CAPLUS ABB=ON	OPTICAL SENSOR#/CT
L19	41	SEA FILE=CAPLUS ABB=ON	L1 AND (L12 OR L15)
L20	5	SEA FILE=CAPLUS ABB=ON	(L3 OR L13 OR L5) AND L19

L1	1551	SEA FILE=CAPLUS ABB=ON	ANALYTICAL APPARATUS/CT
L12	5943	SEA FILE=CAPLUS ABB=ON	CAMERA#/OBI
L21	11	SEA FILE=CAPLUS ABB=ON	L1 AND L12 AND 9/SC, SX
L22	4	SEA FILE=CAPLUS ABB=ON	L21 AND (IMMOBILI? OR SOLID SUPPORT# OR SURFACE#)

*Section code - Biochemical Methods*

L3	344279	SEA FILE=CAPLUS ABB=ON	METAL#/CW
L5	5111	SEA FILE=CAPLUS ABB=ON	MAGNETIC MATERIALS/CT
L12	5943	SEA FILE=CAPLUS ABB=ON	CAMERA#/OBI

Searched by Barb O'Bryen, STIC 308-4291

L15 1547 SEA FILE=CAPLUS ABB=ON OPTICAL SENSOR#/CT  
 L23 148 SEA FILE=CAPLUS ABB=ON (L3 OR L5) AND (L12 OR L15)  
 L24 218565 SEA FILE=CAPLUS ABB=ON (ANTIBODIES OR IMMUNOGLOBULINS OR  
 LIGANDS OR NUCLEIC ACID#)/CW  
 L25 16 SEA FILE=CAPLUS ABB=ON L23 AND L24  
 L26 2 SEA FILE=CAPLUS ABB=ON L25 AND (REFLECT? OR ABSOR? OR  
 DIFFUS?)

L3 344279 SEA FILE=CAPLUS ABB=ON METAL#/CW  
 L5 5111 SEA FILE=CAPLUS ABB=ON MAGNETIC MATERIALS/CT  
 L12 5943 SEA FILE=CAPLUS ABB=ON CAMERA#/OBI  
 L15 1547 SEA FILE=CAPLUS ABB=ON OPTICAL SENSOR#/CT  
 L23 148 SEA FILE=CAPLUS ABB=ON (L3 OR L5) AND (L12 OR L15)  
 L24 218565 SEA FILE=CAPLUS ABB=ON (ANTIBODIES OR IMMUNOGLOBULINS OR  
 LIGANDS OR NUCLEIC ACID#)/CW  
 L25 16 SEA FILE=CAPLUS ABB=ON L23 AND L24  
 L27 8 SEA FILE=CAPLUS ABB=ON L25 AND APPARATUS?

L54 16 L20 OR L22 OR L26 OR L27

FILE 'WPIDS' ENTERED AT 12:37:51 ON 08 JAN 2001  
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FILE LAST UPDATED: 30 DEC 2000 <20001230/UP>  
 >>>UPDATE WEEKS:  
 MOST RECENT DERWENT WEEK 200101 <200101/DW>  
 DERWENT WEEK FOR CHEMICAL CODING: 200101  
 DERWENT WEEK FOR POLYMER INDEXING: 200101  
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L28 110186 SEA FILE=WPIDS ABB=ON CAMERA#  
 L30 1321820 SEA FILE=WPIDS ABB=ON METAL? OR MAGNETIC?  
 L35 82970 SEA FILE=WPIDS ABB=ON PRECIPITAT?  
 L38 63887 SEA FILE=WPIDS ABB=ON ANTIBOD? OR IMMUNOGLOBULIN# OR LIGAND#  
 OR NUCLEIC ACID#  
 L42 340221 SEA FILE=WPIDS ABB=ON S03/DC *Derwent code - Scientific Instrumentation*  
 L51 4 SEA FILE=WPIDS ABB=ON L35 AND (L28 ) AND L42 AND (L38 OR L30)

L30 1321820 SEA FILE=WPIDS ABB=ON METAL? OR MAGNETIC?  
 L32 1820843 SEA FILE=WPIDS ABB=ON IMMOBILI? OR SOLID SUPPORT? OR SURFACE#

L33 384514 SEA FILE=WPIDS ABB=ON OPTICAL?  
 L35 82970 SEA FILE=WPIDS ABB=ON PRECIPITAT?  
 Searched by Barb O'Bryen, STIC 308-4291

L38 63887 SEA FILE=WPIDS ABB=ON ANTIBOD? OR IMMUNOGLOBULIN# OR LIGAND#  
OR NUCLEIC ACID#  
L42 340221 SEA FILE=WPIDS ABB=ON S03/DC  
L52 15 SEA FILE=WPIDS ABB=ON L35 AND (L33 ) AND L42 AND (L38 OR L30)  
AND L32

L55 18 L51 OR L52

=> dup rem 154,155

FILE 'CAPLUS' ENTERED AT 12:38:03 ON 08 JAN 2001  
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FILE 'WPIDS' ENTERED AT 12:38:03 ON 08 JAN 2001  
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PROCESSING COMPLETED FOR L54  
PROCESSING COMPLETED FOR L55  
L56 34 DUP REM L54 L55 (0 DUPLICATES REMOVED)  
ANSWERS '1-16' FROM FILE CAPLUS  
ANSWERS '17-34' FROM FILE WPIDS

=> d ibib ab 1-34; fil hom

L56 ANSWER 1 OF 34 CAPLUS COPYRIGHT 2001 ACS  
ACCESSION NUMBER: 2000:842375 CAPLUS  
DOCUMENT NUMBER: 134:14900  
TITLE: Method and **apparatus** for the identification  
and/or the quantification of a target compound  
INVENTOR(S): Remacle, Jose; Demarteau, Joseph; Zammattéo, Nathalie;  
Alexandre, Isabelle; Hamels, Sandrine; Houbion, Yves;  
De Longueville, Françoise  
PATENT ASSIGNEE(S): Advanced Array Technologies S. A., Belg.  
SOURCE: PCT Int. Appl., 40 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 2  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000072018	A1	20001130	WO 2000-BE54	20000516
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
EP 1054259	A1	20001122	EP 1999-870106	19990519
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO			
PRIORITY APPLN. INFO.:			EP 1999-870106	19990519
			EP 2000-870025	20000218
AB	The present invention is related to a method for the identification and/or Searched by Barb O'Bryen, STIC 308-4291			

the quantification of a target compd. obtained from a sample, preferably a biol. sample, comprising the steps of: putting into contact the target compd. with a capture mol. in order to allow a specific binding between said target compd. with a capture mol., said capture mol. being fixed upon a **surface of a solid support** according to an array comprising a d. of at least 20 discrete regions per cm<sup>2</sup>, each of said discrete regions being fixed with one species of capture mols., performing a reaction leading to a ppt. formed at the location of said binding, detg. the possible presence of ppt.(s) in discrete region(s), and correlating the presence of the ppt.(s) at the discrete region(s) with the identification and/or a quantification of said target compd. CMV DNA or bovine serum albumin were detected on biochips having activated glass-**immobilized** aminated amplicons or antibodies, resp. Biotinylated DNA or antibodies, nanogold particles linked to streptavidin, and silver enhancement reagent were used. The arrays were scanned and the digitalized image was treated with form recognition software in order to delimitate and identify the spots.

REFERENCE COUNT: 6

REFERENCE(S):

- (1) Affymax Tech Nv; WO 9511995 A 1995 CAPLUS
- (2) Aladjem, F; US 4244797 A 1981 CAPLUS
- (3) Aladjem, F; US 4244803 A 1981 CAPLUS
- (4) Ann-Michele, F; US 5270167 A 1993 CAPLUS
- (5) E Y Lab Inc; WO 9419767 A 1994

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 2 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2000:535332 CAPLUS

DOCUMENT NUMBER: 133:128841

TITLE: Matrix assisted pulsed laser evaporation direct write in microelectronics

INVENTOR(S): Chrisey, Douglas B.; McGill, R. Andrew; Pique, Alberto

PATENT ASSIGNEE(S): United States Dept. of the Navy, USA

SOURCE: PCT Int. Appl., 28 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000044960	A1	20000803	WO 2000-US1649	20000127
W: AU, CA, JP, KR, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				

PRIORITY APPLN. INFO.:

US 1999-117468 19990127

US 1999-318134 19990525

AB A device for depositing a transfer material onto a receiving substrate includes a source of pulsed laser energy, a receiving substrate, and a target substrate, which comprises a laser transparent support having a back and a front surface. The front surface has a coating comprising a mixt. of the transfer material, and a matrix material having the property that, when it is exposed to pulsed laser energy, it is more volatile than the transfer material. The pulsed laser is positioned relative to the target substrate, so sufficient pulsed laser energy is directed through the back of the laser-transparent support to strike the coating at a defined location to volatilize the matrix material, causing the coating to desorb from the location and be lifted off the support. The receiving substrate is positioned spaced from the target substrate, so transfer material in the desorbed coating can be deposited at a defined location on the receiving substrate. This process uses laser-positioning means, target substrate positioning means and receiving substrate positioning means.

Searched by Barb O'Bryen, STIC 308-4291

means.

REFERENCE COUNT:  
REFERENCE(S):

12  
 (1) Braudy; US 3745586 A 1973  
 (2) Cook; US 4895735 A 1990 CAPLUS  
 (6) McGill; US 6025036 A 2000 CAPLUS  
 (7) Meneghini; WO 9513195 1995 CAPLUS  
 (12) Williams; US 4987006 A 1991 CAPLUS  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 3 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER:

2000:441672 CAPLUS

DOCUMENT NUMBER:

133:55627

TITLE:

INVENTOR(S):

Integrated portable biological detection system  
 Cheng, Jing; Wu, Lei; Heller, Michael; Sheldon, Ed;  
 Diver, Jonathan; O'Connell, James P.; Smolko, Dan;  
 Jalali, Shila; Willoughby, David

PATENT ASSIGNEE(S):

Nanogen, Inc., USA

SOURCE:

PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000037163	A1	20000629	WO 1999-US31098	19991222
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

PRIORITY APPLN. INFO.:

US 1998-113730 19981223

AB Provided is an integrated, portable system and device for performing active, integrated multi-step sample prepn. and mol. diagnostic anal. of biol. samples using a minimal no. of electronically addressable microchips. Bacterial and cancer cells were sepd. from peripheral human blood in microfabricated electronic chips by dielectrophoresis. The isolated cells were examd. by staining the nuclei with fluorescent dye followed by laser induced fluorescence imaging. DNA and RNA were released from the isolated cells electronically and specific marker sequences were detected by DNA amplification followed by electronic hybridization to **immobilized** capture probes. Efforts towards the construction of a "lab.-on-a-chip" system are presented which involves the selection of DNA probes, dyes, reagents and prototyping of the fully integrated portable instrument.

REFERENCE COUNT:

REFERENCE(S):

3  
 (1) Hansen; US 4661451 A 1987  
 (2) Heller; US 5605662 A 1997 CAPLUS  
 (3) Pethig; US 5795457 A 1998

L56 ANSWER 4 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER:

2000:421409 CAPLUS

DOCUMENT NUMBER:

133:40210

TITLE:

Patterned deposition of antibody-binding proteins for  
 optical diffraction-based biosensors

INVENTOR(S):

McGrath, Kevin; Kaylor, Rosann M.; Everhart, Dennis S.

PATENT ASSIGNEE(S):

Kimberly-Clark Worldwide, Inc., USA  
 Searched by Barb O'Bryen, STIC 308-4291

SOURCE: PCT Int. Appl., 35 pp.  
 DOCUMENT TYPE: CODEN: PIXXD2  
 LANGUAGE: Patent  
 FAMILY ACC. NUM. COUNT: 1 English  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000036416	A1	20000622	WO 1999-US27727	19991122
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

## PRIORITY APPLN. INFO.:

US 1998-213713 19981217

AB The present invention provides an inexpensive and sensitive device and method for detecting and quantifying analytes present in a medium. The device comprises a metalized film upon which is printed a specific, predetd. pattern of an antibody-binding protein. Upon attachment of a target analyte to select areas of the plastic film upon which the protein is printed, diffraction of transmitted and/or **reflected** light occurs via the phys. dimensions and defined, precise placement of the analyte. A diffraction image is produced which can be easily seen with the eye or, optionally, with a sensing device. An immunosensor for LH had immobilized protein A printed on a gold/Mylar film. The sensor was reacted with monoclonal antibody to LH .beta..

## REFERENCE COUNT:

4

## REFERENCE(S):

- (1) Abbott Lab; WO 9609532 A 1996 CAPLUS
- (2) Anon; BIOMATERIALS 1998, V19(7-9), P595
- (3) Binder, A; WO 9821571 A 1998 CAPLUS
- (4) Kimberly Clark Co; WO 9827417 A 1998 CAPLUS

L56 ANSWER 5 OF 34 CAPLUS COPYRIGHT 2001 ACS

## ACCESSION NUMBER:

2000:402097 CAPLUS

## DOCUMENT NUMBER:

133:40221

## TITLE:

Patterned binding of functionalized microspheres for optical diffraction-based biosensors

## INVENTOR(S):

Everhart, Dennis S.; Kaylor, Rosann M.; McGrath, Kevin

## PATENT ASSIGNEE(S):

Kimberly-Clark Worldwide, Inc., USA

## SOURCE:

PCT Int. Appl., 38 pp.

CODEN: PIXXD2

## DOCUMENT TYPE:

Patent

## LANGUAGE:

English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000034781	A2	20000615	WO 1999-US27671	19991122
WO 2000034781	A3	20000817		
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,				

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DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 1998-210016 19981211

AB The present invention provides an inexpensive and sensitive system and method for detecting analytes present in a medium. The system comprises a diffraction enhancing element, such as functionalized microspheres, which are modified such that they are capable of binding with a target analyte. Addnl., the system comprises a polymer film, which may include a metal coating, upon which is printed a specific, predetd. pattern of analyte-specific receptors. Upon attachment of a target analyte to select areas of the polymer film, either directly or with the diffraction enhancing element, diffraction of transmitted and/or **reflected** light occurs via the phys. dimensions and defined, precise placement of the analyte. A diffraction image is produced which can be easily seen with the eye or, optionally, with a sensing device. Blue polystyrene particles were conjugated with monoclonal antibody. A gold/Mylar film was blocked with .beta.-casein and then antibody was immobilized in a pattern on the surface. LH sample was mixed with the microparticles and then applied to the sensor. A nitrocellulose disk with a small hole in the center was used to wick away excess fluid and unbound microparticles. A point light source was transmitted through the hole and sensor to create a diffraction image on the other side.

L56 ANSWER 6 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2000:15485 CAPLUS

DOCUMENT NUMBER: 132:61264

TITLE: Device having fecal component sensor

INVENTOR(S): Roe, Donald Carroll; Fedosov, Yury Igorevich;  
Kruchinin, Mikhail Leonidovich; Khomiakov, Oleg  
Nikolaevich

PATENT ASSIGNEE(S): The Procter & Gamble Company, USA

SOURCE: PCT Int. Appl., 45 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000000822	A1	20000106	WO 1999-US14884	19990629
W:	AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			

AU 9948504 A1 20000117 AU 1999-48504 19990629

PRIORITY APPLN. INFO.:

US 1998-106225 19980629  
US 1998-107561 19980629  
US 1998-90993 19980629  
US 1998-131049 19980929  
WO 1999-US14884 19990629

AB The present invention is directed to a device that comprises a sensor adapted to detect one or more specific health and/or nutrition markers in the subject's feces. The device may also signal the caretaker, the subject, or an actuator of the occurrence. The health marker is heavy metals, radioactive substances, fats, enzymes, microorganisms, etc.

REFERENCE COUNT:

8

Searched by Barb O'Bryen, STIC 308-4291

## REFERENCE(S):

- (3) Hitachi Ltd; JP 08-122247 A 1996 CAPLUS  
 (4) Interactiva Biotechnologie GMB; WO 9749989 A 1997 CAPLUS  
 (5) Kimberly Clark Co; WO 9827417 A 1998 CAPLUS  
 (7) Rahe; EP 0560099 A 1993 CAPLUS  
 (8) Steven, W; US 5468366 A 1995 CAPLUS  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 7 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2000:344067 CAPLUS  
 DOCUMENT NUMBER: 132:345119  
 TITLE: Multi-array, multi-specific electrochemiluminescence testing  
 INVENTOR(S): Wohlstadter, Jacob N.; Wilbur, James; Sigal, George; Martin, Mark; Guo, Liang-hong; Fischer, Alan; Leland, Jon  
 PATENT ASSIGNEE(S): Meso Sclae Technologies, Llc., USA  
 SOURCE: U.S., 68 pp., Cont.-in-part of U.S. Ser. No. 402,076. CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6066448	A	20000523	US 1996-611804	19960306
CA 2213854	AA	19960919	CA 1996-2213854	19960306
CN 1186513	A	19980701	CN 1996-193840	19960306
US 6140045	A	20001031	US 1997-814085	19970306
			US 1995-402076	19950310
			US 1995-402277	19950310
			US 1996-12957	19960306

PRIORITY APPLN. INFO.:

AB Materials and methods are provided for producing patterned multi-array, multi-sp. **surfaces** which are electronically excited for use in electrochemiluminescence based tests. Materials and methods are provided for the chem. and/or phys. control of conducting domains and reagent deposition for use in flat panel displays and multiply specific testing procedures. Anti-prostate specific antigen (PSA) antibody **immobilized** on a patterned gold electrode (prepn. given) was used as an electrochemiluminescent sensor for immunoassay of PSA in serum samples.

REFERENCE COUNT: 18

REFERENCE(S):

- (1) Anon; WO 9005301 1990 CAPLUS  
 (2) Anon; WO 9014221 1990 CAPLUS  
 (3) Anon; EP 0478319 A1 1992 CAPLUS  
 (4) Anon; WO 9214139 1992 CAPLUS  
 (5) Anon; EP 0522677 A1 1993 CAPLUS  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 8 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2000:129506 CAPLUS  
 DOCUMENT NUMBER: 132:177703  
 TITLE: A biosensor array chip and its use in a biochemical detection **apparatus**  
 INVENTOR(S): Takei, Hiroyuki; Sakamoto, Takeshi  
 PATENT ASSIGNEE(S): Hitachi, Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp. CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 Searched by Barb O'Bryen, STIC 308-4291



## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000055920	A2	20000225	JP 1998-221322	19980805

AB A highly sensitive biosensor array chip used in a biochem. detection app. is conveniently constituted for simultaneously detecting multiple substances in a test sample. The base plate of the sensor coated with metal thin membrane (e.g., gold, silver, copper, platinum, aluminum) is divided into multiple sections, and one layer of polystyrene microparticles modified with a resp. biol. mol. (e.g., antibody, antigen, single stranded DNA, receptor, ligand, enzyme) are immobilized on each section by adsorption. A substance (e.g., antigen protein) to be detected in the sample is modified with a fluorescent dye, and the sample is added to the base plate. Then, the antigen protein is adsorbed to polystyrene particles due to its ability to specifically bind with the antibody on the particles, and the fluorescent dye is consequently bound to the particular section on the base plate. The fluorescent signal generated by irradiating excitation light to the section is monitored with a camera through an optical system. In another example, the surface plasmon interaction between gold thin membrane and gold microparticles was used for detection.

L56 ANSWER 9 OF 34 CAPLUS COPYRIGHT 2001 ACS  
 ACCESSION NUMBER: 1999:784329 CAPLUS  
 DOCUMENT NUMBER: 132:20781  
 TITLE: Optical amplification of molecular interactions using liquid crystals  
 INVENTOR(S): Abbott, Nicholas L.; Skaife, Justin J.; Gupta, Vinay K.; Dubrovsky, Timothy B.; Shah, Rahul  
 PATENT ASSIGNEE(S): The Regents of the University of California, USA  
 SOURCE: PCT Int. Appl., 135 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

*Substantive publication date*  
*International filing date*

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9963329	A1	19991209	WO 1999-US12540	19990604

W: CA, JP  
 RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

PRIORITY APPLN. INFO.: US 1998-92453 19980605  
 US 1998-127382 19980731

OTHER SOURCE(S): MARPAT 132:20781

AB App. is described which comprises a first substrate having a surface, the surface comprising a recognition moiety; a mesogenic layer oriented on the surface; and an interface between the mesogenic layer and a member selected from the group consisting of gases, liqs. solids and combinations thereof. A second substrate may be provided over the mesogenic moiety. The app. may be specifically configured for use for detecting an interaction between an analyte and a recognition moiety by detecting changes in the orientation of the mesogens occurring as a result of the interaction. Methods for detecting an analyte are described which entail contacting a recognition moiety for an analyte with a sample so that, when the analyte of interest is present, the contacting causes at least a portion of a plurality of mesogens proximate to the recognition moiety to detectably switch from a first orientation to a second orientation upon contacting the analyte with the recognition moiety; and detecting the second configuration. The analyte may be

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selected from the group consisting of acids, bases, org. ions, inorg. ions, pharmaceuticals, herbicides, pesticides, chem. warfare agents, noxious gases, biomols., and combinations of these. **App.** for synthesizing and screening a library of compds. is also described which comprises a synthesis component, comprising a first substrate having a surface, and a self-assembled monolayer on the surface, the monolayer comprising a reactive functionality; and an anal. component, comprising: a second substrate having a surface, and a mesogenic layer between the surface of the first substrate and the surface of the second substrate. Libraries of compds. synthesized on a self-assembled monolayer are also claimed, as are low energy surfaces (surface energy 1-40 mJ/m<sup>2</sup>) with mesogenic layers anchored on them. Methods for controlling the tilt of, and/or optical texture in a mesogenic layer anchored to, a haloorganosulfur moiety adsorbed on a substrate entail controlling the halogen content of the moiety.

REFERENCE COUNT: 16  
 REFERENCE(S): (1) Affymax; US 5677195 A 1997 CAPLUS  
 (2) Csiro; WO 9403496 A 1994 CAPLUS  
 (4) Drawhorn, R; Journal of Physical Chemistry 1995, V99(45), P16511 CAPLUS  
 (5) Gupta, V; Science 1997, V276(5318), P1533 CAPLUS  
 (6) Gupta, V; Science 1998, V279(5359), P2077 CAPLUS  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 10 OF 34 CAPLUS COPYRIGHT 2001 ACS  
 ACCESSION NUMBER: 1999:468709 CAPLUS  
 DOCUMENT NUMBER: 131:113412  
 TITLE: Identification of particles and macromolecular species by collection and analysis on a **surface**  
 INVENTOR(S): Tovey, Euan Roger; O'Meara, Timothy John; Jones, Allan Sidney  
 PATENT ASSIGNEE(S): Bellon Pty. Limited, Australia; The Institute of Respiratory Medicine Limited  
 SOURCE: PCT Int. Appl., 28 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9936773	A1	19990722	WO 1999-AU17	19990113
W: AU, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9920403	A1	19990802	AU 1999-20403	19990113
PRIORITY APPLN. INFO.:				
			AU 1998-1310	19980113
			WO 1999-AU17	19990113

AB A method of detection and/or identification of particles is disclosed. The method comprises the steps of: (a) collecting the particles onto a **surface**; (b) allowing macromol. species assocd. with the particles to diffuse from the particles; (c) **immobilizing** any diffused macromol. species in close proximity to the particles, wherein an **immobilized** macromol. species is sufficiently close to a particle so as to be indicative as being diffused from the particle; (d) analyzing the **immobilized** macromol. species to det. one or more characteristics of macromol. species; (e) comparing the detd. one or more characteristics of macromol. species characteristics with a ref. base of known characteristics of macromol. species assocd. with particles; and (f) using the comparison of the detd. one or more macromol. species characteristics to indirectly detect and/or identify at least one particle  
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type present on the **surface** assocd. with the analyzed macromol. species **immobilized** in close proximity to the particle. Air samples were collected for 1 h by inertial impaction during normal breathing in houses using intranasal samplers. Inhaled particles were collected withing the sampler onto a transparent adhesive tape which was overlayed with a protein-binding PVDF membrane after sampling was completed. The membrane/adhesive sandwich was wetted with 80% MeOH and then incubated in borate buffer overnight to allow allergens from the particles to bind to the membranes. Vacant binding sites were blocked with skim milk and then the membranes were immunostained with anti-cockroach monoclonal antibody, anti-mouse antibody conjugated with alk. phosphatase, and BCIP/NBT substrate. Particles contg. the allergen were identified by the presence of a halo of stain around the particle.

## REFERENCE COUNT:

## REFERENCE(S):

- 8  
 (1) Milstein; AU 6510990 A 1991  
 (2) Posch, A; Electrophoresis 1997, V18(15), P2803  
 CAPLUS  
 (4) Tovey, E; Journal of Allergy and Clinical  
 Immunology 1988, V81(3), P611 MEDLINE  
 (5) University Of Sydney; AU 687618 B CAPLUS  
 (7) Wex, K; US 5633140 A 1997 CAPLUS  
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L56 ANSWER 11 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:468663 CAPLUS

DOCUMENT NUMBER: 131:113389

TITLE: Sensor for specific binding force discrimination assay  
 using modified substrate and magnetic beads

INVENTOR(S): Lee, Gil U.

PATENT ASSIGNEE(S): United States of America, Secretary of the Navy, USA

SOURCE: PCT Int. Appl., 42 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9936577	A1	19990722	WO 1999-US1191	19990120
W: AU, CA, JP, KR, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
AU 9925601	A1	19990802	AU 1999-25601	19990120
EP 1049808	A1	20001108	EP 1999-905446	19990120
R: CH, DE, FR, GB, IT, LI				
PRIORITY APPLN. INFO.:			US 1998-8782	19980120
			WO 1999-US1191	19990120

AB A sensor for a selected target species has (1) a substrate which has been chem. modified by attachment of substrate modifiers; (2) one or more magnetically active beads which have been chem. modified by attachment of bead modifiers, where these bead modifiers will have a binding affinity for the substrate modifiers in the presence of the target species, and a measurably different binding affinity for the substrate modifiers in the absence of the target species; (3) an adjustable source of a magnetic field for exerting a force on the beads; and (4) an imaging system, for observing and counting beads bound to said substrate. In a preferred embodiment, the invention further has a system for identifying clusters of beads, and for removing the effect of such clusters from measurements of the target analyte. As with other assays, the sensor relies on the ability of certain mols. to bind with specific target (analyte) mols. By coating the beads and the substrate with appropriate mols., the beads will

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(or will not) bind specifically to the substrate in the presence (or absence) of the target mol. When a magnetic field is applied to the substrate, the magnetic beads will be pulled away from the substrate. If the beads are specifically bound to the substrate, however, the beads will be retained on the substrate, indicating the presence (or absence) of the target species. Force discrimination assays were used to detect biotin and ovalbumin. The sensitivity of the ovalbumin assay was 100 pg/mL of ovalbumin.

REFERENCE COUNT: 4

REFERENCE(S):

- (1) Lee; US 5807758 A 1998 CAPLUS
- (2) Motorola Inc; WO 9745740 A1 1997 CAPLUS
- (3) Rohr; US 5445970 A 1995 CAPLUS
- (4) Rohr; US 5445971 A 1995 CAPLUS

L56 ANSWER 12 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1999:350801 CAPLUS

DOCUMENT NUMBER: 130:344884

TITLE: Optical assaying method and system having movable sensor with multiple sensing regions

PATENT ASSIGNEE(S): Imation Corp., USA; Challener, William, A.; Ollmann, Richard, R.

SOURCE: PCT Int. Appl., 33 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9926059	A1	19990527	WO 1998-US24477	19981116
W: CN, JP, KR				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5994150	A	19991130	US 1997-974610	19971119
EP 1034423	A1	20000913	EP 1998-960234	19981116
R: DE, FR, GB				

PRIORITY APPLN. INFO.:

US 1997-974610 19971119  
 WO 1998-US24477 19981116

AB An optical assaying method and system having a movable sensor is described. In one aspect, the present invention is a sensing system having a rotating sensor disk coated with indicator dyes sensitized to a variety of substances. In this configuration the sensing system further includes a detector for sensing spectral changes in light received from one or more of the indicator dyes. In another aspect, the present invention is a sensing system having a surface plasmon resonance sensor disk having grooves extending radially from a center of the disk. In yet another aspect, the present invention is a sensing system including a diffraction anomaly sensor disk having a dielec. layer that varies in thickness. The present invention allows for construction of an inexpensive sensing system that is capable of easily detecting a variety of substances either in a sample or a surrounding environment. Furthermore, the present invention provides a sensing system capable of sensing multiple substances without requiring multiple sensors.

REFERENCE COUNT: 7

REFERENCE(S):

- (1) Gasbarro, L; GB 2073413 A 1981
  - (2) Humberstone, V; US 4893299 A 1990
  - (3) Knoll, W; US 5442448 A 1995
  - (5) Mochida Pharm Co Ltd; EP 0798561 A 1997 CAPLUS
  - (6) North, J; US 4882288 A 1989 CAPLUS
- ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L56 ANSWER 13 OF 34 CAPLUS COPYRIGHT 2001 ACS  
 ACCESSION NUMBER: 1999:101342 CAPLUS  
 DOCUMENT NUMBER: 130:160345  
 TITLE: Methods and apparatus for comparing  
 fluorescence intensity signals  
 INVENTOR(S): Klimant, Ingo  
 PATENT ASSIGNEE(S): Germany  
 SOURCE: Ger. Offen., 14 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19829657	A1	19990204	DE 1998-19829657	19980702
WO 9906821	A1	19990211	WO 1998-EP4779	19980730
W: JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1000345	A1	20000517	EP 1998-945125	19980730
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, IE				
PRIORITY APPLN. INFO.: DE 1997-19733341 19970801				
DE 1998-19829657 19980702				
WO 1998-EP4779 19980730				

AB Methods for fluorometric detn. of biol., chem., or phys. properties of a sample using .gtoreq.2 luminescent materials for one of which at least the luminescence intensity depends on the property of interest while the other has a luminescence intensity and decay time which is independent of the property of interest are described which entail using materials having different luminescence decay times and using the phase or time behavior of the obsd. luminescence to produce a ref. value for the detn. of the property. App. for carrying out the methods comprises a sensor provided with the .gtoreq.2 luminescent materials. Re Os Rh Ir Pt Pd Lu Sn. The luminescent materials may be fluorescent indicators (e.g., for pH, ion concns., etc.).

REFERENCE COUNT: 1  
 REFERENCE(S): (1) Anon; DE 19829657 A1 CAPLUS

L56 ANSWER 14 OF 34 CAPLUS COPYRIGHT 2001 ACS  
 ACCESSION NUMBER: 1998:764324 CAPLUS  
 DOCUMENT NUMBER: 129:341442  
 TITLE: Magnetically-assisted binding assays utilizing a  
 magnetically-responsive reagent  
 INVENTOR(S): Rohr, Thomas E.; Elstrom, Tuan A.; Howard, Lawrence  
 V.; Shain, Eric B.  
 PATENT ASSIGNEE(S): Abbott Laboratories, USA  
 SOURCE: PCT Int. Appl., 103 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9852043	A1	19981119	WO 1998-US9945	19980515
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5998224	A	19991207	US 1997-857440	19970516
Searched by Barb O'Bryen, STIC 308-4291				

EP 981749 A1 20000301 EP 1998-921225 19980515

R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL

PRIORITY APPLN. INFO.:

US 1997-857440 19970516

WO 1998-US9945 19980515

AB Assay methods utilize the response of a magnetically-responsive reagent to the influence of a magnetic field to qual. or quant. measure binding between specific binding pair members. According to the invention, the presence of an analyte mediates whether or not the magnetically-responsive reagent binds to a mobile solid phase reagent. The extent of binding will modulate the response of the magnetically-responsive reagent or that of the mobile solid phase reagent, or both, to the influence of a magnetic field. Hence, by measuring the response to the magnetic field of the magnetically-responsive reagent, or that of the mobile solid phase reagent, the presence or amt. of analyte contained in a test sample can accurately be detd. The invention utilizes various devices to carry out the assay methods described. Urine specimens were analyzed by mixing (a) blue latex particles coated with goat antibody to the .beta. subunit of human chorionic gonadotropin (hCG), (b) anti-hCG .alpha. subunit monoclonal antibody-coated magnetic particles, and (c) urine sample. The mixt. was allowed to stand for 15 min before spotting on a device having capillary channels and a magnetic base plate for self-performing immunoassays. A collection of blue particles conforming in shape to the magnetic field was obsd. with pos. specimens. In contrast, the blue particles remained homogeneously dispersed when the neg. specimens were tested.

L56 ANSWER 15 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:550555 CAPLUS

DOCUMENT NUMBER: 129:172747

TITLE: Small volume in vitro analyte sensor

INVENTOR(S): Heller, Adam; Feldman, Benjamin J.; Say, James; Vreeke, Mark S.; Tomasco, Michael F.

PATENT ASSIGNEE(S): E. Heller & Company, USA

SOURCE: PCT Int. Appl., 83 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9835225	A1	19980813	WO 1998-US2652	19980206
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG			
AU 9861578	A1	19980826	AU 1998-61578	19980206
EP 958495	A1	19991124	EP 1998-906328	19980206
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI			
JP 2000509507	T2	20000725	JP 1998-535046	19980206
US 6143164	A	20001107	US 1998-213040	19981216
US 6120676	A	20000919	US 1999-326235	19990604
PRIORITY APPLN. INFO.:			US 1997-795767	19970206
			WO 1998-US2652	19980206

AB A sensor designed to det. the amt. and concn. of analyte in a sample  
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having a vol. of less than about 1 .mu.L has a working electrode coated with a non-leachable redox mediator. The redox mediator acts as an electron transfer agent between the analyte and the electrode. In addn., a second electron transfer agent, such as an enzyme, can be added to facilitate the electrooxidn. or electroredn. of the analyte. The redox mediator is typically a redox compd. bound to a polymer. The preferred redox mediators are air oxidizable. The amt. of analyte can be detd. by coulometry. One particular coulometric technique includes the measurement of the current between the working electrode and a counter or ref. electrode at two or more times. The charge passed by this current to or from the analyte is correlated with the amt. of analyte in the sample. Other electrochem. detection methods, such as amperometric, voltammetric, and potentiometric techniques, can also be used. The invention can be used to det. the concn. of a biomol., such as glucose or lactate, in a biol. fluid, such as blood or serum. An enzyme capable of catalyzing the electrooxidn. or electroredn. of the biomol. is provided as a second electron transfer agent. A glucose sensor was constructed comprising a Mylar film with a carbon electrode overlaid with a water-insol. dielec. insulator having an opening at the center.. The open area was coated with a redox mediator formed by complexing poly(1-vinylimidazole) with Os(4,4'-dimethoxy-2,2'-bipyridine)2Cl2 followed by crosslinking glucose oxidase with the osmium polymer using polyethylene glycol diglycidyl ether. A PTFE spacer was placed on the electrode surrounding the mediator-covered surface. A sorbent of nylon was placed in contact with the mediator-covered surface of the working electrode. A counter/ref. electrode was placed in contact with the spacer and the side of the sorbent opposite to the working electrode so that the two electrodes were facing each other. Clamed polycarbonate plates pressed the electrodes together. Sample (0.5 .mu.L) was wicked into the sorbent via a small nylon tab and glucose was detd. coulometrically.

L56 ANSWER 16 OF 34 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:457218 CAPLUS

DOCUMENT NUMBER: 129:78843

TITLE: Method and **apparatus** for immunoassay using fluorescent induced surface plasma emission

INVENTOR(S): Lin, Jinn-nan; Wilson, Christopher J.

PATENT ASSIGNEE(S): Diagnostic Products Corp., USA

SOURCE: U.S., 19 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5776785	A	19980707	US 1996-777406	19961230
EP 851230	A1	19980701	EP 1997-310569	19971223
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AU 9749232	A1	19980709	AU 1997-49232	19971223
AU 698376	B2	19981029		
JP 10311831	A2	19981124	JP 1997-366987	19971226
			US 1996-777406	19961230

PRIORITY APPLN. INFO.:

AB A method and **app.** are described for immunoassays utilizing an improved collection technique of fluorescence induced emissions at the solid phase/liq. phase interface from surface plasmon resonance sensing devices. In a preferred embodiment, a solid phase substrate is coated with a thin film of a conducting material on which a first specific binding partner is directly or indirectly immobilized. The coated solid phase substrate is incubated with a liq. component comprised of a biol. Searched by Barb O'Bryen, STIC 308-4291

sample contg. a specific ligand or analyte and a fluorescent-labeled second specific binding partner in the case of immunometric assays, or a fluorescent labeled ligand or analog thereof in the case of competitive assays. Improvements are described in the method of light collection for the induced emission of surface plasmon resonance based sensing devices which involve (a) irradiating the film of the stratified optical system from the substrate side with light that has a wavelength, polarization and angle of incidence appropriate for exciting surface plasmon resonance fluorescence; (b) incubating the sample contg. fluorescently labeled mols. with said solid phase substrate film; and (c) employing 360.degree. azimuthal collection of the fluorescence induced emission cone, and monitoring and analyzing the rate or amt. by which the detected induced emission intensity changes as binding between the fluorescent or fluorescently labeled mols. and the film progresses.

L56 ANSWER 17 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

ACCESSION NUMBER: 2000-452070 [39] WPIDS

DOC. NO. NON-CPI: N2000-336598

DOC. NO. CPI: C2000-137722

TITLE: **Infrared optical** element used in a sensor for analyzing fluids, especially biological fluids, or body tissue in diagnostics, or cosmetic skin analysis, comprises a Knoop hardness of up to 20.

DERWENT CLASS: B04 E32 J04 L03 P81 **S03** V07

INVENTOR(S): KATZIR, A

PATENT ASSIGNEE(S): (KATZ-I) KATZIR A

COUNTRY COUNT: 90

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 2000036458	A1	20000622	(200039)*	EN	59
RW: AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL					
OA PT SD SE SL SZ TZ UG ZW					
W: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES					
FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS					
LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL					
TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW					
AU 2000015833	A	20000703	(200046)		

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000036458	A1	WO 1999-IL672	19991209
AU 2000015833	A	AU 2000-15833	19991209

#### FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000015833	A Based on	WO 200036458

PRIORITY APPLN. INFO: US 1998-111929 19981211

AB WO 200036458 A UPAB: 20001006

NOVELTY - The infrared (IR) **optical** element has a Knoop hardness of up to 20 and includes up to 10 parts per million (ppm) of impurities, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) forming the novel **optical** element, comprising cold working an ingot of an ionic crystalline material having a Knoop hardness Searched by Barb O'Bryen, STIC 308-4291



of up to 20 and including up to 10 ppm impurities;

(2) a sensor for attenuated total reflection spectroscopy, comprising a flat portion up to 1 mm thick of the ionic crystalline material, having a Knoop hardness of up to 20 and including up to 10 ppm impurities, or having an elongation ratio of at least 10 % at a temperature below 200 deg. C;

(3) a cell, for attenuated total reflection spectroscopy, comprising the sensor of (2);

(4) a spectrometer, for attenuated total reflection spectroscopy, comprising the sensor of (2), or the cell of (3);

(5) making a sensor for total reflection spectroscopy, comprising forming, on a **surface** of a substrate having an index of refraction, a layer, including only an ionic crystalline material having a Knoop hardness of up to 20, or an elongation ratio of at least 10 % at a temperature below 200 deg. C, and having an index of refraction lower than that of the substrate;

(6) an **optical** element, comprising an ionic crystalline material having an elongation ratio of at least 10 % at a temperature below 200 deg. C, and including up to 10 ppm impurities; and

(7) forming an **optical** element, comprising cold working an ingot of an ionic crystalline material having an elongation ratio of at least 10 % at a temperature below 200 deg. C, and including up to 10 ppm impurities.

USE - The infrared **optical** element is used in a sensor, for analyzing a fluid by contacting the sensor with the fluid and measuring its IR spectrum, and for analyzing a body tissue by contacting the sensor with the tissue, preferably subcutaneously using a hypodermic needle, catheter or endoscope, and measuring its IR spectrum (claimed). The sensor is useful in the diagnosis of tissues and biological fluids, in medicine, in cosmetics for skin analysis, or for measuring the diffusion of cosmetics into the skin. They can also be used in thermal imaging devices, IR lasers, and IR spectroscopy in industry, science, medicine clinical chemistry and pathology.

ADVANTAGE - The **optical** elements can be manufactured in less time, at lower cost, and with easier handling suitable for mass production. As lower temperatures are used for the cold working, more accurate dimensions can be achieved and **surface** finish is better, compared to more conventional materials such as other inorganic crystals and polymers. The low impurity content prevents darkening of the material.

DESCRIPTION OF DRAWING(S) - The drawing shows a schematic illustration of two cold working methods of forming an infrared **optical** element.

Monocrystalline ingot 64

Dies 66

Piston 68

Lower die 72

Punch 74

Piston 76

Base 78.

Dwg. 5/20

L56 ANSWER 18 OF 34	WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD
ACCESSION NUMBER:	1999-013415 [02] WPIDS
DOC. NO. NON-CPI:	N1999-010201
TITLE:	Standard cell apparatus for wavelength stabilisation type light source used in <b>optical</b> pumping atomic oscillator - <b>precipitates</b> alkali <b>metal</b> -atom in vapour state by reducing temperature inside cell, simultaneously maintaining <b>metal</b> stream pressure.
DERWENT CLASS:	S03 V08
	Searched by Barb O'Bryen, STIC 308-4291

PATENT ASSIGNEE(S): (ANRI) ANRITSU CORP  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 10281883	A	19981023	(199902)*		8

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 10281883	A	JP 1997-110127	19970411

PRIORITY APPLN. INFO: JP 1997-110127 19970411

AB JP 10281883 A UPAB: 19990122

The cell apparatus has a cell (1) in which an alkali-metal atom in vapour state is sealed. The cell (1) is divided into two cell parts (11,12) with atom oscillating vertically between these two cells. The cell part (11) which comprises reflecting **surfaces** (11a,11b), is enclosed in a **magnetic** shield (4). Temperature sensors (2,7) detect temperature of cell parts (11,12), respectively.

Temperature controllers (3,8) are provided to control temperature of respective cells. Temperature is detected to be between 10-15 degree Celsius. The detected temperature is reduced, to **precipitate** the atom that **precipitate** on **surfaces** except the **surfaces** (11a,11b) that reflects light, simultaneously maintaining the **metal** steam pressure, appropriately.

ADVANTAGE - Maintains spectral level line stably due to high S/N ratio.  
 Dwg.1/8

L56 ANSWER 19 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1996-050422 [06] WPIDS

DOC. NO. NON-CPI: N1996-042274

DOC. NO. CPI: C1996-016518

TITLE: Prod. of a dye as a prod. of a **pptn.** reaction  
 - uses a soln. of cresyl violet with a soln. mixt. of Guinea Green B and Fast Green FCF.

DERWENT CLASS: B04 D16 **S03**

INVENTOR(S): REISCHLE, H

PATENT ASSIGNEE(S): (REIS-I) REISCHLE H

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 4422250	A1	19960104	(199606)*		3

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 4422250	A1	DE 1994-4422250	19940624

PRIORITY APPLN. INFO: DE 1994-4422250 19940624

AB DE 4422250 A UPAB: 19960212

Prod. of a dye as a prod. of a **pptn.** reaction comprises forming a soln. of cresyl violet and mixing it with a soln. of Guinea Green B and Fast Green FCF.

Searched by Barb O'Bryen, STIC 308-4291

USE - The dye can be used to colour the whole cytoplasm of cell cultures, to show the nucleus and an isolated display of certain proteins, e.g. lipids, carbohydrates and **nucleic acids** in a diffused low contrast colouration.

ADVANTAGE - The method allows a microscopic digital picture to be taken, even by a video **camera**, for computer-aided image analysis without needing manual image corrections at the monitor.  
Dwg.0/1

L56 ANSWER 20 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD  
 ACCESSION NUMBER: 1996-007417 [01] WPIDS  
 DOC. NO. NON-CPI: N1996-006731  
 DOC. NO. CPI: C1996-002252  
 TITLE: Prodn. of formylated **optical** fibre composed of resin - by coating fibre core with **pppte.** obtd. from poly aldehyde, alkali **metal** hydroxide and adhesive, useful in immunoassay detection systems.  
 DERWENT CLASS: A14 A25 A89 B04 G02 J04 L01 P81 S03  
 PATENT ASSIGNEE(S): (IBIG) IBIDEN CO LTD  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 07287134	A	19951031	(199601)*		6

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 07287134	A	JP 1994-104744	19940418

PRIORITY APPLN. INFO: JP 1994-104744 19940418

AB JP 07287134 A UPAB: 19960115

Prodn. of a formylated resin **optical** fibre comprises: (a) mixing a straight chain or branched (un)satd. 4-10C di- or trialdehyde with an aq. soln. of an alkali **metal** hydroxide; (b) gradually adding water to the soln. to form a white **pppte.**; (c) recovering, washing and drying the **precipitate** to obtain a polymer; (d) mixing the polymer with an adhesive; (e) applying the polymer to the **surface** of the core of the **optical** fibre; and (f) curing and polishing the core.

Also claimed is the obtd. formylated **optical** fibre.

USE/ADVANTAGE - The fibre is used in immunoassay detection systems. **Optical** fibre retains light propagation efficiency to enhance sensitivity. Less change in the amt. of formyl gp. is observed using soln. described above even if the strength of alkali **metal** hydroxide has a slight variation. Reproducibility of **immobilisation** of immune material on the **optical** fibre is thus high.

ADVANTAGE - **Optical** fibre retains light propagation efficiency to enhance sensitivity. Less change in the amt. of formyl gp. is observed using soln. described above even if the strength of alkali **metal** hydroxide has a slight variation. Reproducibility of **immobilisation** of immune material on the **optical** fibre is thus high.

Dwg.0/2

L56 ANSWER 21 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD  
 ACCESSION NUMBER: 1995-140204 [19] WPIDS  
 DOC. NO. NON-CPI: N1995-110269  
 DOC. NO. CPI: C1995-064757  
 Searched by Barb O'Bryen, STIC 308-4291

TITLE: Sensor for detecting degree of **surface** wetting, esp. of vehicle windscreen, by **pptn.** - comprises beam guide body coupled to **precipitation**-wetttable transparent pane consisting of reflector sandwiched between two bonded pane layers.

DERWENT CLASS: L03 Q17 **S03** X22

INVENTOR(S): BERBERICH, R

PATENT ASSIGNEE(S): (VDOT) VDO SCHINDLING AG ADOLF

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 4333665	A1	19950406	(199519)*		4

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 4333665	A1	DE 1993-4333665	19931002

PRIORITY APPLN. INFO: DE 1993-4333665 19931002

AB DE 4333665 A UPAB: 19950524

A sensor device for detecting the degree of wetting of a **pptn** .-wetttable transparent pane consists of a beam guide body which is coupled to the pane in its wetting region at the **surface** not exposed to the **pptn.** and which is associated with spaced beam transmitter and receiver devices. The transmitted beam is subjected, dependent on the **pptn.** on the pane, to multiple reflection at the pane and at a reflector extending parallel to the pane before passing to the receiver which provides a signal dependent on the **pptn.** amount.

The novelty is that the pane (1) has two bonded pane layers (8, 9) between which the reflector (12) is arranged.

The pane (1) is a laminated glass pane bonded by a two-sided adhesive foil (10), the reflector (12) being located between the foil (10) and the pane layer (8) exposed to the **pptn.** The reflector (12) may be a **metallised** foil region, a **metallised** pane region or a **metal** plate or foil esp. recessed in the outer pane (8). The back face (20) of the sensor device housing (14) may serve for fixing a rear-view mirror within an automobile.

USE - Esp. for detecting **pptn.** on a vehicle windscreen, the sensor being fixed on the back of a rear-view mirror to face the windscreen.

ADVANTAGE - The sensor device has extremely good response and is independent of tolerance effects of its **optical** components.

Dwg.1/1

L56 ANSWER 22 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1994-027452 [04] WPIDS

DOC. NO. NON-CPI: N1994-021265

DOC. NO. CPI: C1994-012668

TITLE: Test for blood serum samples containing antigens - is fully automatic with calibration of holes in gel plate with comparison against standard samples and mask adjustment.

DERWENT CLASS: B04 J04 **S03**

INVENTOR(S): DITTLER, R

PATENT ASSIGNEE(S): (DITT-I) DITTLER R

COUNTRY COUNT: 1

PATENT INFORMATION:

Searched by Barb O'Bryen, STIC 308-4291

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 4318692	A1	19940120	(199404)*		9
DE 4318692	C2	19940908	(199434)		9

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 4318692	A1	DE 1993-4318692	19930604
DE 4318692	C2	DE 1993-4318692	19930604

PRIORITY APPLN. INFO: DE 1992-4218727 19920606

AB DE 4318692 A UPAB: 19940307

Process for testing blood serum samples, containing antigens, comprises comparison of standard samples containing antigens in stamped holes in a gel plate containing **antibodies**. The location of the stamped hole in the field is set by interactive sliding of a software-related mask on the X-Y plane, and a single establishment of the hole size by altering the mask up to the max. possible cover with the hole. The size of the **precipitate** ring is set by interactive mask size and position change round the identified hole and the covering **precipitate** ring. The image measure is calibrated by the known size of the hole and the size of the **precipitate** ring of the blood serum sample tested for comparison with the size of the **precipitate** ring of the standard sample.

The iterative change for the position and size of the mask is related to a bright hole and covering **precipitate** ring until the masked image section has a max. grey value at the max. possible surface. A number of holes with standard samples are scanned for calibration of the system, and the results stored, for standard samples to be selected at random. The electronic imaging unit is a flatbed scanner using a monochrome CCD **camera** (5) with a macro-zone lens. After each field image has been taken, the plate (1) is moved to present a new hole field to the **camera** (5). A plotter (2) has a clamped quadrilateral slide (4) to position the plate (1) against the plotter pen. A PC gives control, image processing and statistical evaluation.

USE/ADVANTAGE - The technique is for testing blood serum samples, containing antigens, with simple radial immune diffusion.  
Dwg.2/5

L56 ANSWER 23 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD  
ACCESSION NUMBER: 1995-014862 [03] WPIDS  
DOC. NO. NON-CPI: N1995-011667  
TITLE: Moisture sensor, pref. for vehicle windscreen or rear window - has radiation detectors for correction of main moisture detector signals disturbed by interference from intermediate layer.  
DERWENT CLASS: S03 X22  
INVENTOR(S): BENDICKS, N; BARTLING, R  
PATENT ASSIGNEE(S): (KOST-N) KOSTAL GMBH & CO KG LEOPOLD  
COUNTRY COUNT: 2  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 4318114	A1	19941208	(199503)*		6
US 5498866	A	19960312	(199616)		11
DE 4318114	C2	19980716	(199832)		

Searched by Barb O'Bryen, STIC 308-4291

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 4318114	A1	DE 1993-4318114	19930601
US 5498866	A	US 1994-194254	19940210
DE 4318114	C2	DE 1993-4318114	19930601

PRIORITY APPLN. INFO: DE 1993-4318114 19930601

AB DE 4318114 A UPAB: 19950126

The radiation guide (2) bonded by transparent adhesive to the inside of the screen (1) consists of two parallel sections having **optically** sepd. base portions (2a', 2a'') joined together mechanically and carrying opposed radiation windows and plano-convex lenses (2b\*, 2b\*\*, 2c\*, 2c\*\*).

The windows are of equal size and arranged so that the centre lines of the lenses are offset by about 90 deg. Radiation emitters and receivers are arranged on these lines with additional detectors facing windows (2d', 2d'') on one side of the plane of symmetry of the guide.

USE/ADVANTAGE - Sensing **precipitation** on glass, multi-layer screen. Esp. on windscreen or rear window of vehicle. Interference from very thin intermediate layer can have no noteworthy effect on control of wipers.

Dwg. 1/4

L56 ANSWER 24 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1993-397734 [50] WPIDS

DOC. NO. NON-CPI: N1993-307493

DOC. NO. CPI: C1993-176962

TITLE: Automatic immunoassay using **magnetic** particles  
 - involves placing sample and the particles bound with antigen or **antibody** in vessel having dent in bottom, stirring, **precipitating** **magnetic** material, tilting vessel etc..

DERWENT CLASS: B04 D16 S03

PATENT ASSIGNEE(S): (FJRE) FUJI REBIO KK

COUNTRY COUNT: 1

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 05297001	A	19931112	(199350)*		5

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 05297001	A	JP 1992-95601	19920415

PRIORITY APPLN. INFO: JP 1992-95601 19920415

AB JP 05297001 A UPAB: 19940203

The method comprises (i) a dispensing step in which a sample and **magnetic** particles bound with antigen or **antibody** are dispensed in a vessel with a dent in the bottom, (ii) a stirring for mixing the sample and the **magnetic** particles in the vessel, (iii) **precipitating** forcedly the **magnetic** particles by **magnetic** matter, (iv) slanting the vessel and holding it in that position, and (v) detecting flow inside the slanted vessel, and carrying out continuously these steps.

The device for automatic immunoassay is claimed.

Pref. detecting means in the device contains a **camera**  
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device for photographing the inside of the vessel and an image treating device for image-treating the output of the **camera** device.

USE/ADVANTAGE - A method for automatic immunoassay, in which a sample and sensitised **magnetic** particles are reacted in a vessel with stirring, the **magnetic** particles are forcedly **pptd.** by **magnetic** powder and the vessel is slanted and the flowing state of the reacted **magnetic** particles at the bottom of the vessel is judged. Method can be automatically and precisely carried out.  
Dwg.0/1

L56 ANSWER 25 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD  
ACCESSION NUMBER: 1993-304731 [39] WPIDS  
DOC. NO. NON-CPI: N1993-234412  
TITLE: Rain sensor for vehicle windscreen - has reflective foil on inside of windscreen preventing response of **optical** sensor to **precipitation** on inside of windscreen.  
DERWENT CLASS: Q17 S03 X22  
INVENTOR(S): PIENTKA, R  
PATENT ASSIGNEE(S): (BOSC) BOSCH GMBH ROBERT  
COUNTRY COUNT: 3  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 562275	A1	19930929	(199339)*	GE	6
	R: DE FR GB				
DE 4209680	A1	19930930	(199340)		2


## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 562275	A1	EP 1993-102580	19930219
DE 4209680	A1	DE 1992-4209680	19920325

PRIORITY APPLN. INFO: DE 1992-4209680 19920325

AB EP 562275 A UPAB: 19931123  
The rain sensor (14) uses light transmitted between a light source (15) and a photodetector (16) via the windscreen (10) with reflection of the light from the wetted **surface** of the latter. The inside **surface** of the windscreen has an adhered reflective foil (27), preventing the propagated light rays from responding to **precipitation** on the inside of the windscreen disc (10).  
Pref. the reflective foil (27) comprises a **metal** band or a plastics band with a **metal** coating, its reflection characteristics being matched to the wavelength of the employed light.  
ADVANTAGE - Simple rain sensor unaffected by condensation on inside of windscreen.  
Dwg.1/2

L56 ANSWER 26 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD  
ACCESSION NUMBER: 1993-152871 [19] WPIDS  
CROSS REFERENCE: 1992-300183 [36]; 1996-076885 [08]  
DOC. NO. NON-CPI: N1993-117071  
DOC. NO. CPI: C1993-068260  
TITLE: Light sensitive thin film **optical** immunoassay device - comprises enzyme-**antibody** conjugate, provides highly sensitive detection of bacteria for diagnosis.  
DERWENT CLASS: B04 D16 S03  
Searched by Barb O'Bryen, STIC 308-4291



INVENTOR(S): BILODEAU, R J; BOGART, G R; CRIDER, D G; MAUL, D M;  
 PATENT ASSIGNEE(S): BLESSING, J; CROSBY, M; KELLEY, H; MILLER, B J  
 COUNTRY COUNT: (BIOS-N) BIOSTAR INC  
 18  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
AU 9225327	A	19930325	(199319)*		38
CA 2078897	A	19930402	(199324)		
EP 546222	A1	19930616	(199324)	EN	20
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE					
JP 05203650	A	19930810	(199336)		16
AU 658668	B	19950427	(199525)		
US 5418136	A	19950523	(199526)		67
EP 546222	B1	19970910	(199741)	EN	22
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE					
DE 69127628	E	19971016	(199747)		
ES 2109258	T3	19980116	(199810)		
JP 2834950	B2	19981214	(199904)		14
JP 11072495	A	19990316	(199921)		13
US 5955377	A	19990921	(199945)		
JP 3107787	B2	20001113	(200060)		13

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
AU 9225327	A	AU 1992-25327	19920923
CA 2078897	A	CA 1992-2078897	19920923
EP 546222	A1	EP 1991-308968	19911001
JP 05203650	A	JP 1992-254562	19920924
AU 658668	B	AU 1992-25327	19920923
US 5418136	A CIP of	US 1992-923332	19920731
		US 1993-76719	19930610
EP 546222	B1	EP 1991-308968	19911001
DE 69127628	E	DE 1991-627628	19911001
		EP 1991-308968	19911001
ES 2109258	T3	EP 1991-308968	19911001
JP 2834950	B2	JP 1992-254562	19920924
JP 11072495	A Div ex	JP 1992-254562	19920924
		JP 1998-198609	19920924
US 5955377	A CIP of	US 1991-653052	19910211
	CIP of	US 1992-923090	19920731
	Cont of	US 1993-75693	19930610
		US 1995-403565	19950417
JP 3107787	B2 Div ex	JP 1992-254562	19920924
		JP 1998-198609	19920924

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 658668	B Previous Publ.	AU 9225327
DE 69127628	E Based on	EP 546222
ES 2109258	T3 Based on	EP 546222
JP 2834950	B2 Previous Publ.	JP 05203650
JP 3107787	B2 Previous Publ.	JP 11072495

PRIORITY APPLN. INFO: EP 1991-308968 19911001; US 1991-764319  
 19910924

AB AU 9225327 A UPAB: 20001123  
 Searched by Barb O'Bryen, STIC 308-4291



A thin film **optical** immunoassay device (A) comprises a **solid support** substrate having: (a) an upper and lower **surface**; (b) an unlabelled liquid **antibody** (Ab) layer bound to the substrate on the upper **surface**; (c) at least one layer comprising an **immobilised** enzyme conjugate, on its upper **surface**; complexed with an analyte of interest and capable of interacting with an enzyme reactive delivery substance to form an insoluble reaction prod., where the conjugate layer and unlabelled Ab layer have a measurably increased mass change capable of **precipitation** by an agent applied as a substrate.

Also claimed are: (1) a process for detecting an analyte in a medium; (2) a diagnostic test kit for performing at least one thin film **optical** immunoassay.

USE - This immunoassay device is highly sensitive. The use of Ab-enzyme conjugates in place of latex-reagent particles provides an improver sensitivity, particularly with selected substances for the enzyme which provide insol. **precipitated** prods.. Low levels of polysaccharide Ags can be detected, e.g. bacteria responsible for infections in man such as meningitis and streptococcus.  
Dwg.1/1

L56 ANSWER 27 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD  
ACCESSION NUMBER: 1992-425280 [52] WPIDS  
DOC. NO. NON-CPI: N1992-324471  
TITLE: Sensor assembly detecting wetness of motor vehicle  
windscreen - includes receiver for radiation reflected  
from **precipitation** esp. drops of rain.  
DERWENT CLASS: Q17 S03 X22  
INVENTOR(S): BENDICKS, N; BOEBEL, R; ESDERS, B; FELDMUELLER, L;  
LEVERS, J; FELDMULLER, L  
PATENT ASSIGNEE(S): (KOST-N) KOSTAL GMBH & CO KG LEOPOLD  
COUNTRY COUNT: 3  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 4202121	C1	19921224	(199252)*		7
BR 9204701	A	19930803	(199335)		
US 5543923	A	19960806	(199637)#		7

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 4202121	C1	DE 1992-4202121	19920127
BR 9204701	A	BR 1992-4701	19921218
US 5543923	A	US 1993-7252	19930121

PRIORITY APPLN. INFO: DE 1992-4202121 19920127; US 1993-7252  
19930121

AB DE 4202121 C UPAB: 19931006

The front **surface** of a radiation conducting body (2), in the shape of a trapezium, is coupled by means of **optical** adhesive at the inner **surface** of the screen (1) not subjected to the **precipitation**, in the area of the wiping range determined by the screen wiping unit, and is continuously influenced by a heating unit (10).

The approximately equal **surfaces** of the trapezium spatially separated from each other are respectively assigned a radiation emitter (3) or a receiver (4) via respective lenses (2b). The radiation conducting body has a recess (12) lying outside the radiation path, in the central region of its rear **surface** (2'') facing away from the  
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screen (1). This accommodates the heating unit (10) assigned to the radiation conducting body via the coupling medium (13).

USE/ADVANTAGE - Optimum relationships concerning heat transmission on radiation conducting body ensured by relatively simple measures. Delivery signal for automatic switching on of windscreen wiper(s). (Dwg.1,2/7 1,2/7

L56 ANSWER 28 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD  
 ACCESSION NUMBER: 1991-135986 [19] WPIDS  
 DOC. NO. NON-CPI: N1991-104402  
 DOC. NO. CPI: C1991-058626  
 TITLE: **Optical** measuring device for use in immunoassay  
 ~ includes slab waveguide with vertical major reaction faces which generates evanescent wave component to excite fluorescence in sample.  
 DERWENT CLASS: B04 J04 **S03** S05  
 PATENT ASSIGNEE(S): (DAIK) DAIKIN KOGYO KK  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
JP 03072264	A	19910327	(199119)*		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
JP 03072264	A	JP 1989-209034	19890811

PRIORITY APPLN. INFO: JP 1989-209034 19890811

AB JP 03072264 A UPAB: 19930928

The **optical** measuring device is used to measure the **optical** characteristics of a test material located near the **surfaces** of a slab waveguide of rectangular cross section using the evanescent wave component generated by introducing excitation light in the slab waveguide. The slab waveguide (1) is arranged so that the major reaction faces (15) are vertical; and reaction chambers (21) are provided to face the major reaction faces (15).

USE/ADVANTAGE - Used in immunoassay to detect immunoreactions and to determine the quantity of antigens or **antibodies**. Where immunoreactions are performed on the reaction faces and signal fluorescence corresp. to the quantity of reaction is obtd. the interfering substance **pptes.** on the **surfaces** other than the reaction faces since the major reaction faces of slab waveguide are set vertical and reaction chambers are provided so as to face the reaction faces. As a result, it can be exactly prevented that signal fluorescence is absorbed by the interfering substance, and correct measurement can be made. @ (5pp Dwg.No.0/0)

L56 ANSWER 29 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD  
 ACCESSION NUMBER: 1986-000768 [01] WPIDS  
 DOC. NO. NON-CPI: N1986-000573  
 DOC. NO. CPI: C1986-000262  
 TITLE: **Optical** evaluation of agglutination reactions -  
 by direct measurement of **ppte.** area, useful for assay of antigens, **antibodies**, etc..  
 DERWENT CLASS: B04 S02 **S03** S05  
 INVENTOR(S): FINK, H J; GRONSKI, P; LAPPE, F; MAGERKURTH, K O; POST, L  
 PATENT ASSIGNEE(S): (BEHW) BEHRINGWERKE AG  
 COUNTRY COUNT: 13  
 Searched by Barb O'Bryen, STIC 308-4291

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
DE 3422616	A	19851219	(198601)*		14
EP 165551	A	19851227	(198601)	GE	
R: AT BE CH DE FR GB IT LI LU NL SE					
AU 8543803	A	19860102	(198608)		
JP 61013135	A	19860121	(198609)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
DE 3422616	A	DE 1984-3422616	19840619
EP 165551	A	EP 1985-107257	19850612
JP 61013135	A	JP 1985-130954	19850618

PRIORITY APPLN. INFO: DE 1984-3422616 19840619

AB DE 3422616 A UPAB: 19930922

**Optical** method for detecting and determining one partner (I) of a reaction by means of agglutination, comprises directly measuring the area defined by the reaction **ppte.**, then using this value to quantitatively determine the amt., or activity, of (I). Pref. the **pptn.** is measured on several specific (I) dilutions. One reactant is present in soln., the other is in soln. or **immobilised**.

Appts. for quantitative determination of the area of two-dimensional objects comprises (in order) a light source; illuminating lens; diaphragm; object; imaging lens; and a sensor (consisting of several linear detectors). Either the object or the sensor is perpendicular to the **optical** axis, so that by scanning the entire area can be detected.

USE/ADVANTAGE - The method is used for reactions involving antigens, **antibodies** and opt. one or more active complement components. It provides very accurate values for the area of ring patterns and is more reproducible than known photographic methods. It also allows the influence of complement on the reactions to be evaluated.

3/3

L56 ANSWER 30 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1984-158728 [25] WPIDS

CROSS REFERENCE: 1988-212845 [30]

DOC. NO. NON-CPI: N1984-117979

DOC. NO. CPI: C1984-067005

TITLE: Sepn. of IgA binding protein from **surface** of Gp.B streptococcus - useful in testing for Neisseria meningitidis or gonorrhoea.

DERWENT CLASS: B04 D16 **S03**

INVENTOR(S): BLAKE, M; GOTSCHLICH, E; RUSSELL-JONES, J; RUSSELLJON, G J; RUSSELL-JONES, G J

PATENT ASSIGNEE(S): (UYRQ) UNIV ROCKEFELLER

COUNTRY COUNT: 16

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
WO 8402194	A	19840607	(198425)*	EN	21
RW: AT BE CH DE FR GB LU NL SE					
W: AU DK JP NO					
AU 8424307	A	19840618	(198439)		
NO 8403094	A	19841015	(198448)		
EP 127681	A	19841212	(198450)	EN	

Searched by Barb O'Bryen, STIC 308-4291

R: AT BE CH DE FR GB LI LU NL SE  
 JP 60500029 W 19850110 (198508)  
 DK 8403705 A 19840730 (198601)  
 CA 1221626 A 19870512 (198723)  
 EP 127681 B1 19930303 (199309) EN 9  
 R: AT BE CH DE FR GB LI LU NL SE  
 DE 3382662 G 19930408 (199315)  
 US 5202232 A 19930413 (199317) 4  
 JP 07004267 B2 19950125 (199508) 5

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 8402194	A	WO 1983-US1904	19831201
EP 127681	A	EP 1984-900422	19831201
JP 60500029	W	JP 1984-500553	19831201
EP 127681	B1	WO 1983-US1904	19831201
		EP 1984-900422	19831201
DE 3382662	G	DE 1983-3382662	19831201
		WO 1983-US1904	19831201
		EP 1984-900422	19831201
US 5202232	A CIP of	US 1982-446319	19821202
	Cont of	US 1986-829708	19860213
	Cont of	US 1988-217822	19880712
		US 1991-759866	19910916
JP 07004267	B2	WO 1983-US1904	19831201
		JP 1984-500553	19831201

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 127681	B1 Based on	WO 8402194
DE 3382662	G Based on	EP 127681
	Based on	WO 8402194
US 5202232	A Cont of	US 4757134
JP 07004267	B2 Based on	JP 60500029
	Based on	WO 8402194

PRIORITY APPLN. INFO: US 1982-446317 19821202; US 1986-829708  
 19860213

AB WO 8402194 A UPAB: 19950306

The sepn. is from the Streptococcus that will bind to IgA and comprises extrn. of the Streptococci in the log phase with an aq. medium contg. a material to disrupt the bond between the cell **surface** and the protein. A soln. contg. the protein (I) is obtd. and a **pptn.** agent is added to recover (I) as a **ppte.**

Typically 1-10% Na dodecylsulphate (II) is used at pH 6-9, and EtOH is used for **pptn.** at 0-10 deg.C. A non-ionic detergent may be similarly used. The extn. may be in an aq. buffer of 1-10% polyethylene glycol p-isobutylphenyl ether at pH 6-9, or with dil. HCl.

The (I) can be used in the detection of Neisseria meningitidis, Haemophilus influenzae and Diplococcus pneumoniae; and of N. gonorrhoea, by its presence in a body fluid, esp. by the cleavage of IgA to sub-class IgA1.

0/0

Dwg.0/0

L56 ANSWER 31 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD  
 ACCESSION NUMBER: 1983-B4733K [05] WPIDS  
 DOC. NO. NON-CPI: N1983-019204  
 Searched by Barb O'Bryen, STIC 308-4291

TITLE: Monitoring polarised particles in liquid - using centrifugal force to facilitate spread of deposit of particles, onto substrate.

DERWENT CLASS: P41 S03

INVENTOR(S): KWON, O K

PATENT ASSIGNEE(S): (JONE-I) JONES D G

COUNTRY COUNT: 14

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
EP 70148	A	19830119	(198305)*	EN	13
R: AT BE CH DE FR IT LI LU NL SE					
GB 2103358	A	19830216	(198307)		
DK 8203063	A	19830418	(198322)		
US 4500839	A	19850219	(198510)		
CA 1191723	A	19850813	(198537)		
GB 2103358	B	19851224	(198601)		
EP 70148	B	19861120	(198647)	EN	
R: AT BE CH DE FR IT LI LU NL SE					
DE 3274382	G	19870108	(198702)		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
EP 70148	A	EP 1982-303574	19820708
GB 2103358	A	GB 1982-19859	19820708
US 4500839	A	US 1982-396689	19820709

PRIORITY APPLN. INFO: GB 1981-21183 19810709; GB 1982-19859 19820708

AB EP 70148 A UPAB: 19930925

**Magnetically** or electrically polarised or polarisable particles carried in a liquid are monitored by impinging a flow of the liquid onto the upper **surface** of a substrate located in a **magnetic** or electric force field extending at right angles to the **surface**. The substrate is rotated about an axis, passing through the substrate and disposed parallel to the force field, at an angular speed sufficient to cause the rotation to modify the flow speed of the liquid across the **surface** and permit the force field to **precipitate** the particles onto the **surface**. The **precipitated** particles are then **optically** monitored.

The substrate is pref. a flat plate of **optically** transparent material. Pref. a cylindrical magnet rotating with and disposed closely below the substrate is used to apply the force field to the substrate.

L56 ANSWER 32 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD

ACCESSION NUMBER: 1982-A3960J [48] WPIDS

TITLE: Engine wear debris in lubricant analysing method - has liquid medium carrying particles fed to substrate via tube without subjecting latter to fluctuating lateral compressions.

DERWENT CLASS: S02 S03

INVENTOR(S): KWON, O K

PATENT ASSIGNEE(S): (JONE-I) JONES D G

COUNTRY COUNT: 2

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
Searched by Barb O'Bryen, STIC 308-4291					

GB 2099140	A	19821201 (198248)*	16
US 4492461	A	19850108 (198504)	
GB 2099140	B	19851030 (198544)	

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
GB 2099140	A	GB 1982-7989	19820318
US 4492461	A	US 1982-357553	19820312

PRIORITY APPLN. INFO: GB 1981-8695 19810319; GB 1982-7989  
19820318

AB GB 2099140 A UPAB: 19930915

The method produces a deposit of particles from a liq. medium carrier on a substrate for subsequent **optical** analysis of the particles. The liq. medium carrying the particles is fed to the substrate via a flexible tube which is not subjected to fluctuating lateral compressions. The method has partic. relevance to the making of Ferrograms from wear debris in a sample of machine lubricant.

The sample liq. may be supplied by a peristaltic or plunger pump acting on air or diluent upstream of the sample. Such an arrangement avoids modification of the particles by crushing or polishing and contamination by debris from the supply tube. A manually operable pressure control valve may be provided in a tube between the pump and a bottle.  
1/10

L56 ANSWER 33 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD  
ACCESSION NUMBER: 1982-16278E [09] WPIDS  
TITLE: Monitoring strength of coloured solns. - by transmitting pulses of radiation of two wavelengths through solns..  
DERWENT CLASS: A89 J04 S03  
INVENTOR(S): BECK, R A  
PATENT ASSIGNEE(S): (PYRN) PYRENE CHEM SERV  
COUNTRY COUNT: 1  
PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG
GB 2082320	A	19820303 (198209)*			9
GB 2082320	B	19840627 (198426)			

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
GB 2082320	A	GB 1981-23943	19810805

PRIORITY APPLN. INFO: GB 1980-26899 19800818; GB 1981-23943  
19810805

AB GB 2082320 A UPAB: 19930915

Process comprises transmitting pulses of electromagnetic radiation of two wavelengths, one of which is in the visible region, into the soln.. The pulses, after transmission through the soln., are monitored and their absorption at these wavelengths compared to determine the degree of colour saturation and hence the soln. strength.

The invention also relates to an **optical** probe and comprises a transmitter unit including a convex lens (6) and light sources (4,5) having different emission characteristics arranged in a liq. -tight  
Searched by Barb O'Bryen, STIC 308-4291

housing. The probe also includes a receiver unit including an **optical** sensing element (8) also in a liq.-tight housing. The transmitter and receiving units are connected (3) so that they face one another so that radiation from the transmitter is received by the receiver and the chemical soln. can circulate freely in the space between planar light-transmitting windows (7,12).

Used in automatic control systems e.g. to control the strength of a soln. or a treatment time. Particular application to **metal** treatment e.g. **metal** plating or for applying a passivating **surface** coating. Operation independent of change in opacity of sample caused e.g. by **pptn.** or build-up of dirt and debris.

1

L56 ANSWER 34 OF 34 WPIDS COPYRIGHT 2001 DERWENT INFORMATION LTD  
 ACCESSION NUMBER: 1979-59712B [32] WPIDS  
 CROSS REFERENCE: 1978-63189A [35]  
 TITLE: Quantitative determ. of protein in antigen sample - by **optical** imaging of **pptn.** zones formed by immuno-electrophoresis with **antibody** source.  
 DERWENT CLASS: B04 J04 S03 S05  
 INVENTOR(S): AYENGER, P K  
 PATENT ASSIGNEE(S): (ALAD-I) ALADJEM F J  
 COUNTRY COUNT: 1  
 PATENT INFORMATION:

PATENT-NO	KIND	DATE	WEEK	LA	PG
US 4162208	A	19790724	(197932)*		

PRIORITY APPLN. INFO: US 1975-546351 19750203; US 1978-892953  
 19780403; US 1979-29772 19790413; US  
 1979-97931 19791127

AB US 4162208 A UPAB: 19930901

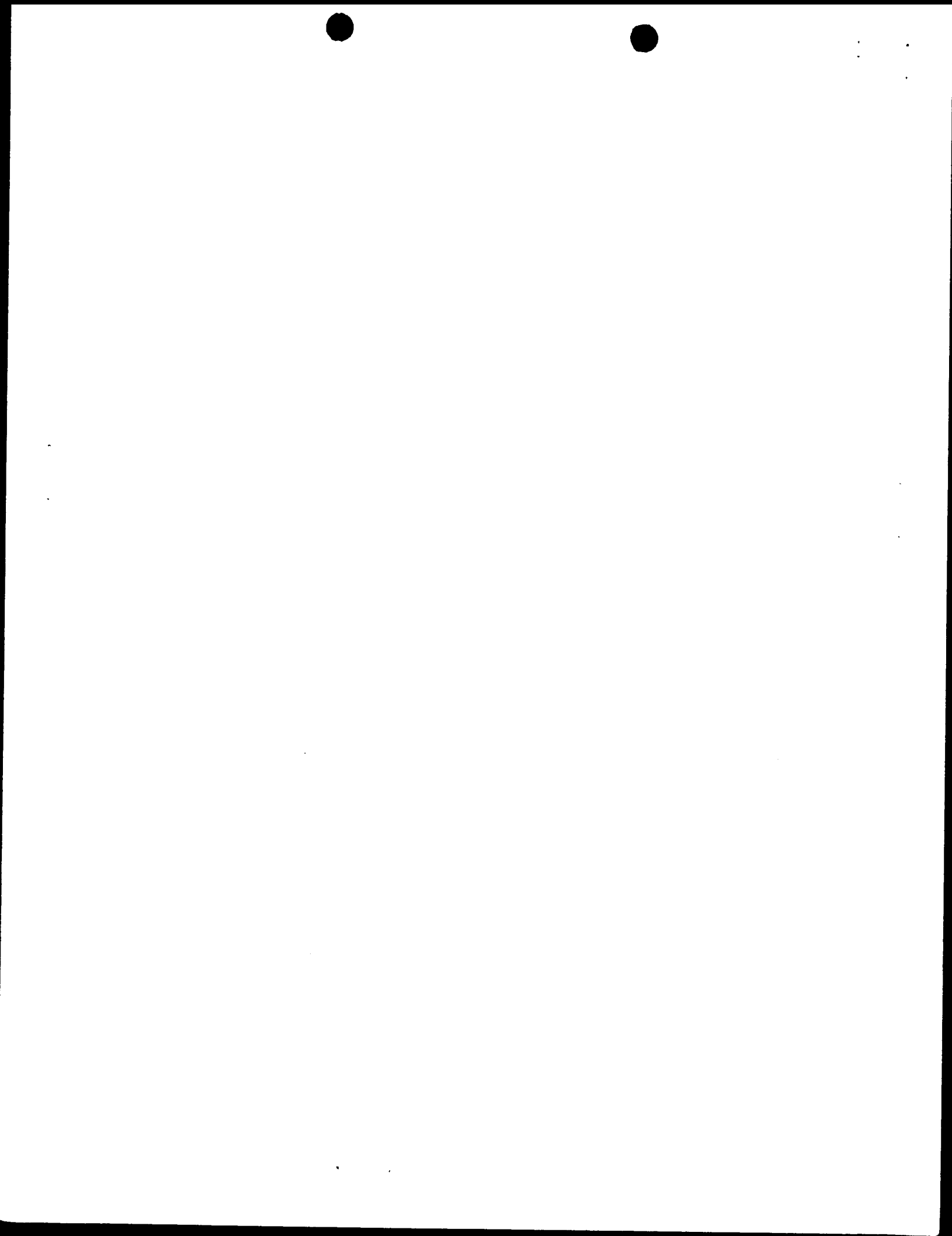
Concn. of a protein in an antigen sample, which has been subjected to immunoelectrophoresis with an **antibody** source contg. an **antibody** specific to the protein to produce  $\geq 1$  **pptn.** zone, is measured quantitatively by use of **optical** imaging.

Method comprises (a) **optically** imaging the **pptn.** zone(s) on the image **surface** of a video **camera** tube; (b) developing electrical position signals which represent 2-dimensional position coordinates at a number of **surface** positions corresp. to selected positions of the zone image; (c) deriving electronically from the position signals an electrical parameter signal respecting a zone parameter which varies with the protein concn; (d) and comparing the parameter signal with a set of reference parameter signals derived correspondingly from reference zones produced by equivalent immunoelectrophoresis of a number of reference zones produced by equivalent immunoelectrophoresis of a number of reference antigen solns. contg. respective known concns. of the protein.

Method is useful in analysis of serum, spinal fluid, tissue extracts, etc., used in clinical diagnosis. The Parent Patent claimed quantitative determ. of a protein in an antigen sample by immunoelectrophoresis and immuno-diffusion.

FILE 'HOME' ENTERED AT 12:38:54 ON 08 JAN 2001

Searched by Barb O'Bryen, STIC 308-4291





? show files

File 94:JICST-EPlus 1985-2000/Dec W5  
 (c)2000 Japan Science and Tech Corp(JST)  
 File 144:Pascal 1973-2001/Dec W5  
 (c) 2001 INIST/CNRS  
 File 2:INSPEC 1969-2001/Dec W4  
 (c) 2001 Institution of Electrical Engineers  
 File 34:SciSearch(R) Cited Ref Sci 1990-2001/Jan W1  
 (c) 2001 Inst for Sci Info  
 File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
 (c) 1998 Inst for Sci Info

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Set	Items	Description
S1	273636	(PRECIPITAT? OR PPTN OR PPT OR PPTNG)
S2	146310	(CAMERA? OR OPTICAL(W) (SENSOR? OR IMAG?))
S3	3361823	MAGNETIC? OR METAL OR METALS OR METALLIC
S4	1585503	(NUCLEIC(W)ACID# OR ANTIBOD? OR ANTIGEN? OR LIGAND? OR IMM- UNOGLOBULIN?)
S5	151	S1 AND S2 AND (S3 OR S4)
S6	2623593	IMMOBILI? OR SOLID(W)SUPPORT? OR SURFACE OR SURFACES
S7	10	S5 AND S6
S8	565188	ASSAY? OR IMMUNOASSAY?
S9	7181134	EVALUAT? OR MEASUR? OR IDENTIF? OR QUANTITAT? OR QUANTIF?
S10	2	S5 AND S8
S11	72	S5 AND S9
S12	67	S9(8N)S1 AND S2
S13	22	S12 AND (S3 OR S4)
S14	0	S12 AND S4
S15	13603	S1(8N)S9
S16	2104	S15 AND S6
S17	59	S16 AND S4
S18	0	S2 AND S17
S19	1421487	LIGHT(2N)BEAM? OR LASER OR LASERS OR ELECTROMAGNETIC? OR S- PECTROPHOTOMET?
S20	2415894	REFLECT? OR ABSOR? OR DIFFUS?
S21	0	S17 AND S19
S22	9	S17 AND S20
S23	2	S22 AND ANALYSIS/TI
S24	794	S1 AND (S2 OR S19) AND S6 AND (S8 OR S9)
S25	15	S4 AND S24
S26	6034675	ANALY?
S27	10782	(S3 OR S4) (S) (S8 OR S9 OR S26) (S)S1
S28	47	S2 AND S27
S29	1847	S6 (S)S27
S30	460	S29 AND (S2 OR S19 OR S20)
S31	2	S29 (S)S2
S32	3	S29 AND S2
S33	1691061	COMPUTER?
S34	10	S30 AND S33

?

? s s7 or s10 or s23 or s32

10 S7  
 2 S10  
 2 S23  
 3 S32

Searched by Barb O'Bryen, STIC 308-4291

S35 13 S7 OR S10 OR S23 OR S32  
? rd

...completed examining records  
S36 13 RD (unique items)  
? t s36/7/1-13

36/7/1 (Item 1 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
(c)2000 Japan Science and Tech Corp(JST). All rts. reserv.

03466395 JICST ACCESSION NUMBER: 98A0017042 FILE SEGMENT: JICST-E  
CMOS Micro Electro Mechanical Systems.

BALTES H (1)

(1) Univ. Waterloo, Ontario, CAN

Sens Mater, 1997, VOL.9,NO.6, PAGE.331-346, FIG.10, REF.50

JOURNAL NUMBER: L0338AAP ISSN NO: 0914-4935 CODEN: SENME

UNIVERSAL DECIMAL CLASSIFICATION: 621.382.002.2 53.084

LANGUAGE: English COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: This introduction to the merging of MEMS and CMOS IC technology includes a summary of current technological approaches to CMOS MEMS, illustrations by selected CMOS MEMS microtransducer prototypes and an outline of the MEMS CAD tools, SOLIDIS and ICMAT. (author abst.)

36/7/2 (Item 2 from file: 94)  
DIALOG(R)File 94:JICST-EPlus  
(c)2000 Japan Science and Tech Corp(JST). All rts. reserv.

02209869 JICST ACCESSION NUMBER: 94A0846415 FILE SEGMENT: JICST-E  
Two Cases of Herpes Simplex Virus-induced Endotheliitis Accompanied by  
Uveitis.

YAMAGUCHI HITOMI (1); FUJINO YUJIRO (1); MIYATA KAZUNORI (1); TSURU  
TADAHIKO (1)

(1) Univ. of Tokyo, Fac. of Med.

Atarashii Ganka(Journal of the Eye), 1994, VOL.11,NO.9, PAGE.1389-1392,  
FIG.5, REF.8

JOURNAL NUMBER: Y0754AAA ISSN NO: 0910-1810 CODEN: ATGAE

UNIVERSAL DECIMAL CLASSIFICATION: 617.71/.78

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: We report two cases of corneal endotheliitis(58-year-old and 59-year-old females) associated with heavy vitreous opacity caused by herpes simplex virus(HSV) infection. The main symptoms were visual disturbances in the affected eyes. They exhibited tritis, keratic \*\*\*\*precipitates\*\*\*\*, corneal edema and diffuse vitreous opacity. HSV infection was diagnosed by detection of HSV-DNA in aqueous humor by polymerase chain reaction(PCR) or by the ratio of anti-HSV \*\*\*\*antibody\*\*\*\* titer of the aqueous humor to that of serum. The vitreous opacity and corneal endotheliitis were resolved by topical and systemic acyclovir therapy. (author abst.)

36/7/3 (Item 1 from file: 144)  
DIALOG(R)File 144:Pascal  
(c) 2001 INIST/CNRS. All rts. reserv.  
Searched by Barb O'Bryen, STIC 308-4291

02842817 PASCAL No.: 80-0456217  
PRECIPITATE ADSORPTION ON \*\*\*\*\*SURFACE\*\*\*\*\* (PAS): A NEW PRINCIPLE FOR  
SEROLOGICAL \*\*\*\*\*ANALYSIS\*\*\*\*\*

ELWING H

INST. MED. MICROBIOL., GOETEBORG 41346, SWEDEN

Journal: F.E.B.S. LETTERS, 1980, 111 (2) 365-368

Availability: CNRS-13934

No. of Refs.: 7 REF.

Document Type: P (SERIAL) ; A (ANALYTIC)

Country of Publication: NETHERLANDS

Language: ENGLISH

COMPARAISON DE LA METHODE D'ADSORPTION DU PRECIPITE SUR UNE  
\*\*\*\*\*SURFACE\*\*\*\*\* COUVERTE D'\*\*\*\*\*ANTIGENE\*\*\*\*\* , VISUALISEE PAR CONDENSATION  
D'EAU ET DE LA DOUBLE \*\*\*\*\*DIFFUSION\*\*\*\*\* COMPARATIVE EN GEL. METHODE  
APPLIQUEE A LA RELATION \*\*\*\*\*ANTIGENIQUE\*\*\*\*\* ENTRE LES IGG HUMAINES ET  
D'AUTRES ANIMAUX

36/7/4 (Item 2 from file: 144)  
DIALOG(R) File 144:Pascal  
(c) 2001 INIST/CNRS. All rts. reserv.

01185087 PASCAL No.: 76-0014456  
METALLKUNDE. QUANTITATIVE METALLOGRAPHIE  
(METALLOGRAPHIE QUANTITATIVE)  
1975 1-88  
Availability: CNRS-RP00117  
No. of Refs.: 5 P.  
Report No.: EUR-5320 D  
Document Type: R (REPORT) ; M (MONOGRAPHIC)  
Country of Publication: LUXEMBOURG  
Language: GERMAN Summary Language: FRENCH; ENGLISH  
DANS LE BUT D'AMELIORER LES POSSIBILITES DE LA METALLOGRAPHIE  
QUANTITATIVE, ON A MIS AU POINT UNE UNITE COMPORTANT UN ENREGISTREMENT  
DIGITAL DES IMAGES. L'IMAGE DETECTEE PAR UNE \*\*\*\*\*CAMERA\*\*\*\*\* DE TELEVISION  
ET MISE EN MEMOIRE AU MOYEN D'UN INTERFACE, EST ANALYSEE PAR UN CALCULATEUR  
A L'AIDE DE PROGRAMMES ADEQUATS. IL EXISTE DEJA DES PROGRAMMES POUR LA  
DETERMINATION DE LA PART DE \*\*\*\*\*SURFACE\*\*\*\*\* POUR LA RECONNAISSANCE DES  
PARTICULES AINSI QUE POUR L'ANALYSE GEOMETRIQUE D'IMAGES. EN PRINCIPE TOUS  
LES PROCEDES D'ANALYSE PEUVENT ETRE PROGRAMMES ET AINSI EMPLOYES.  
APPLICATION A L'ETUDE DE LA \*\*\*\*\*PRECIPITATION\*\*\*\*\* DE CARBURES DANS UN ACIER  
A OUTILS

36/7/5 (Item 3 from file: 144)  
DIALOG(R) File 144:Pascal  
(c) 2001 INIST/CNRS. All rts. reserv.

00974131 PASCAL No.: 76-0134556  
\*\*\*\*\*SURFACE\*\*\*\*\* IMMUNE \*\*\*\*\*PRECIPITATION\*\*\*\*\* A NEW METHOD FOR RAPID  
\*\*\*\*\*QUANTITATIVE\*\*\*\*\* \*\*\*\*\*ANTIGEN\*\*\*\*\* \*\*\*\*\*ANALYSIS\*\*\*\*\*  
MORRIS D A N; SMITH M D; GREYSON J  
AMES CO., ELKHART, INDIANA 46514, USA  
Journal: J. IMMUNOL. METHODS, 1976, 9 (3-4) 363-372  
Availability: CNRS-15654  
No. of Refs.: 4 REF.  
Document Type: P (SERIAL) ; A (ANALYTIC)  
Country of Publication: NETHERLANDS  
Language: ENGLISH  
CETTE NOUVELLE TECHNIQUE CONSISTE A DEPOSER UNE GOUTTELETTE DE  
L'ECHANTILLON D'\*\*\*\*\*ANTIGENE\*\*\*\*\* (IGG PAR EXEMPLE), DIRECTEMENT A LA  
Searched by Barb O'Bryen, STIC 308-4291

\*\*\*\*SURFACE\*\*\*\* D'UN GEL CONTENANT L'ANTICORPS, LE GEL ETANT SUPPORTE PAR UN SUBSTRAT REFLECHISSANT. L'INTENSITE \*\*\*\*DIFFUSANTE\*\*\*\* DU PRECIPITE EST LIEE A LA CONCENTRATION D'\*\*\*\*ANTIGENE\*\*\*\* DANS LA GOUTTELETTE

36/7/6 (Item 1 from file: 2)  
 DIALOG(R)File 2:INSPEC  
 (c) 2001 Institution of Electrical Engineers. All rts. reserv.

03747485 INSPEC Abstract Number: A90147053

Title: Investigations of oxygen \*\*\*\*precipitates\*\*\*\* in Czochralski silicon wafers by using infrared tomography

Author(s): Fillard, J.P.

Author Affiliation: Lab. LINCOS, Univ. des Sci. et Tech. du Languedoc, Montpellier, France

Journal: Journal of Crystal Growth vol.103, no.1-4 p.71-7

Publication Date: June 1990 Country of Publication: Netherlands

CODEN: JCRGAE ISSN: 0022-0248

U.S. Copyright Clearance Center Code: 0022-0248/90/\$03.50

Conference Title: 3rd International Symposium on Defect Recognition and Image Processing in III-V Compounds (DRIP-III)

Conference Date: 22-25 Sept. 1989 Conference Location: Tokyo, Japan

Language: English Document Type: Conference Paper (PA); Journal Paper (JP)

Treatment: Experimental (X)

Abstract: Currently, oxygen atoms are intentionally introduced in Si crystals during Czochralski (CZ) pulling process. They usually come from a controlled out-diffusion from the crucible, the expected role of these impurities being to generate silicon oxide clusters or micro-\*\*\*\*precipitates\*\*\*\*. Afterwards, these small aggregates are able to getter residual impurities which are introduced into the wafer during the integrated circuit fabrication processes. This operation is called 'internal gettering' and its successive steps, from 'embryo' nucleation to \*\*\*\*precipitate\*\*\*\* condensation, require an adapted control adjustment. Convenient thermal cycles reduce the amount of \*\*\*\*metallic\*\*\*\* doping in the vicinity of the ICs, thus improving specifications such as diode leakage current or minority carrier lifetimes or premature oxide breakdown. This is a key problem in VLSI technology as well as in CCDs. It is also worth noting that the device process itself (annealing) participates in the final texture of \*\*\*\*precipitates\*\*\*\* and in the dimension of the '\*\*\*\*precipitate\*\*\*\* free zone' (or denuded zone) underlying the wafer \*\*\*\*surface\*\*\*\*. Experimental means for observing the individual \*\*\*\*precipitates\*\*\*\* and their spatial distribution are not so diversified. X-rays, EBIC or chemical etching are used to obtain images of these defects. The latter technique is the most widely used but not so precise; three-dimensional exploration requires delicate preparation such as controlled bevel etching. It is also known that not all species of \*\*\*\*precipitates\*\*\*\* can be revealed by etching. Recently, a new technique called 'laser scanning tomography' (LST) has been proposed. It consists of scanning the bulk of the wafer with a thin laser probe beam along a virtual plane; the scattered light image is recorded with a \*\*\*\*camera\*\*\*\* and computer reconstructed. LST is non-destructive, very sensitive to all kinds and sizes of microprecipitates and has three-dimensional capability; it does not need any special and time-consuming preparation or vacuum conditions. Internal structures such as depleted zone (DZ) or striations or layered structures are easily detected and \*\*\*\*measured\*\*\*\*. Both qualitative (profiles, features) and \*\*\*\*quantitative\*\*\*\* (densities, size, dimensions, classification) information is obtained from LST images. (45 Refs)

Subfile: A

36/7/7 (Item 1 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2001 Inst for Sci Info. All rts. reserv.

05875970 Genuine Article#: XD472 Number of References: 31  
Title: Structural and \*\*\*\*magnetic\*\*\*\* analysis of Ni81Fe19/Ag multilayers  
with ultrathin Ni81Fe19 sublayers  
Author(s): Chladek M (REPRINT) ; Dorner C; Matner M; Hoffmann H; Valvoda V  
Corporate Source: CHARLES UNIV,FAC MATH & PHYS, KE KARLOVU 5/CR-12116  
PRAGUE 2//CZECH REPUBLIC/ (REPRINT); UNIV REGENSBURG,INST EXPT & ANGEW  
PHYS/D-93053 REGENSBURG//GERMANY/  
Journal: JOURNAL OF PHYSICS-CONDENSED MATTER, 1997, V9, N22 (JUN 2), P  
4557-4574  
ISSN: 0953-8984 Publication date: 19970602  
Publisher: IOP PUBLISHING LTD, DIRAC HOUSE, TEMPLE BACK, BRISTOL, ENGLAND  
BS1 6BE

Language: English Document Type: ARTICLE

Abstract: The \*\*\*\*magnetic\*\*\*\* and structural properties of Ni81Fe19/Ag  
multilayer films with very thin sublayers of the \*\*\*\*magnetic\*\*\*\*  
Ni81Fe19 component, ranging from 5 Angstrom to 10 Angstrom, were  
studied. A transition from a nearly pure superparamagnetic behaviour  
( $t(\text{NiFe}) = 5$  Angstrom) to a nearly ferromagnetic behaviour ( $t(\text{NiFe}) =$   
10 Angstrom) was observed, with a transition at the Ni81Fe19 layer  
thickness of about 7 Angstrom. The observed differences in  
\*\*\*\*magnetic\*\*\*\* properties are thought to be mainly connected with the  
size of the NiFe particles in the \*\*\*\*magnetic\*\*\*\* sublayers, which can  
be controlled by their thickness. The structure of the \*\*\*\*magnetic\*\*\*\*  
sublayers becomes more disturbed with decreasing thickness, as can be  
judged from the in-plane correlation length, roughness, and strain, and  
the numbers of \*\*\*\*precipitated\*\*\*\* crystallites of the two components.  
The influences of various annealing processes were examined, and the  
structural changes were followed in situ by high-angle x-ray  
diffraction (XRD). The temperature treatment increased the  
magnetoresistance ratio. We observed a gradual growth of the content of  
silver and NiFe \*\*\*\*precipitates\*\*\*\* with increasing annealing,  
temperature. The structure of the original multilayers gradually  
deteriorates with increasing temperature, and the whole complex  
consists of a mixture of residual multilayer blocks and  
\*\*\*\*precipitates\*\*\*\*. The observed structural characteristics of the  
multilayers under study have been found essential to the understanding  
of their \*\*\*\*magnetic\*\*\*\* properties.

36/7/8 (Item 2 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2001 Inst for Sci Info. All rts. reserv.

05568496 Genuine Article#: WG851 Number of References: 60  
Title: Lead adsorption at the calcite-water interface: Synchrotron X-ray  
standing wave and X-ray reflectivity studies  
Author(s): Sturchio NC (REPRINT) ; Chiarello RP; Cheng LW; Lyman PF; Bedzyk  
MJ; Qian YL; You HD; Yee D; Geissbuhler P; Sorensen LB; Liang Y; Baer  
DR  
Corporate Source: ARGONNE NATL LAB,9700 S CASS AVE/ARGONNE//IL/60439  
(REPRINT); NORTHWESTERN UNIV,/EVANSTON//IL/60208; UNIV  
WASHINGTON,/SEATTLE//WA/98195; BATTELLE MEM INST,PACIFIC NW  
LABS/RICHLAND//WA/99352  
Journal: GEOCHIMICA ET COSMOCHIMICA ACTA, 1997, V61, N2 (JAN), P251-263  
ISSN: 0016-7037 Publication date: 19970100  
Publisher: PERGAMON-ELSEVIER SCIENCE LTD, THE BOULEVARD, LANGFORD LANE,  
KIDLINGTON, OXFORD, ENGLAND OX5 1GB  
Language: English Document Type: ARTICLE  
Searched by Barb O'Bryen, STIC 308-4291

Abstract: By combining synchrotron X-ray standing wave (XSW) measurements with synchrotron X-ray reflectivity measurements, we have determined: (1) the precise three-dimensional location within the calcite unit cell of submonolayer Pb ions adsorbed at the calcite (104) \*\*\*\*surface\*\*\*\* from dilute aqueous solutions, and (2) the precise one-dimensional location of these unit cells relative to the calcite \*\*\*\*surface\*\*\*\*. Our XSW measurements, using three separate calcite Bragg reflections for triangulation, show that most adsorbed Pb ions occupy Ca sites in the calcite lattice with an ordered coverage of 0.05 equivalent monolayers, while the remaining Pb ions are disordered with a coverage of 0.03 equivalent monolayers. Our X-ray reflectivity measurements show that the ordered Pb ions occur primarily (>70%) in the \*\*\*\*surface\*\*\*\* atomic layer of calcite. Atomic force microscopy (AFM) was used to characterize the topography of the calcite (104) \*\*\*\*surface\*\*\*\* under conditions similar to the X-ray experiments. The quantitative morphological information obtained by AFM was used to develop realistic models of the calcite \*\*\*\*surface\*\*\*\*. The calculated X-ray reflectivities for these model \*\*\*\*surfaces\*\*\*\* were compared with the measured X-ray reflectivities. The new combined X-ray method that we have developed can be used to determine the atomic-scale structure of other \*\*\*\*metals\*\*\*\* adsorbed at mineral-water interfaces. Such high-resolution structural determinations are essential before detailed conceptual and theoretical models can be further developed to understand and predict the behavior of dissolved \*\*\*\*metals\*\*\*\* in mineral-water systems. Copyright (C) 1997 Elsevier Science Ltd.

36/7/9 (Item 3 from file: 34)  
 DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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05444222 Genuine Article#: VZ347 Number of References: 34  
 Title: ON THE DETECTION OF MX-\*\*\*\*PRECIPITATES\*\*\*\* IN MICROALLOYED STEELS USING ENERGY-FILTERING TEM  
 Author(s): HOFER F; WARBICHLER P; BUCHMAYR B; KLEBER S  
 Corporate Source: GRAZ TECH UNIV, RES INST ELECTRON MICROSCOPY, STEYRERGASSE 17/A-8010 GRAZ//AUSTRIA/; GRAZ TECH UNIV, CHRISTIAN DOPPLER LAB MODELLING MICROSTRUCT CHANG/A-8010 GRAZ//AUSTRIA/  
 Journal: JOURNAL OF MICROSCOPY-OXFORD, 1996, V184, DEC (DEC), P163-174  
 ISSN: 0022-2720  
 Language: ENGLISH Document Type: ARTICLE  
 Abstract: The properties of microalloyed steels and HSLA steels depend predominantly on the size and composition of nanometre-sized MX \*\*\*\*precipitates\*\*\*\* consisting of Nb, Ti, V, C and N. In this work we present a rapid and powerful method for visualizing these small \*\*\*\*precipitates\*\*\*\* directly in the steel matrix.

This can be achieved by energy-filtering TEM in a 200-kV microscope. We have recorded elemental maps (three-window method) and jump-ratio images (two-window method) using the inner-shell ionization edges; e.g. Fe-M(23), Fe-L(23), V-M(23), V-L(23), Nb-N(23), Nb-M(45), C-K and N-K edges. We have found that \*\*\*\*precipitates\*\*\*\* in a steel matrix can be best visualized by recording the jump-ratio image of the matrix element. If the specimens are thinner than 30 nm and high resolution in the images and low detection limits are essential, low energy-loss edges should be used preferentially; in the case of steels the Fe-M(23) edge should be used instead of the Fe-L(23) edge. If the jump-ratio images are recorded with the Fe-M(23) edge, \*\*\*\*precipitates\*\*\*\* about 2 nm in diameter may be detected. With thicker samples and if high resolution is not as essential, higher energy-loss edges are preferable, because diffraction effects are less possible.

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The chemical composition of the larger \*\*\*\*precipitates\*\*\*\* (10 nm) could be determined by recording EDX spectra using an STEM probe. We found Nb and V with an atomic ratio of about 3, but we could not detect carbon or nitrogen in the spectra. The Nb and V distribution could be best visualized with a jump-ratio image including both the Nb-N-23 and the V-M(23) edges. However, it was not possible to image the carbon or nitrogen content of the \*\*\*\*precipitates\*\*\*\* unequivocally due to overlapping of the C-K and N-K edges with the Nb-M(45) edge.

36/7/10 (Item 4 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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04337211 Genuine Article#: RW605 Number of References: 33  
Title: MOLECULAR STUDY OF P-GLYCOPROTEIN IN MULTIDRUG-RESISTANCE USING  
\*\*\*\*SURFACE\*\*\*\*-PLASMON RESONANCE  
Author(s): DEMEULE M; VACHON V; DELISLE MC; BEAULIEU E; AVERILLBATES D;  
MURPHY GF; BELIVEAU R  
Corporate Source: UNIV QUEBEC, DEPT CHIM BIOCHIM, MEMBRANOL LAB, POB8888, STN  
A/MONTREAL/PQ H3C 3P8/CANADA/; UNIV QUEBEC, DEPT CHIM BIOCHIM, MEMBRANOL  
LAB/MONTREAL/PQ H3C 3P8/CANADA/; UNIV QUEBEC, DEPT CHIM BIOCHIM, RECH  
BIOTHERAPEUTMOLEC GRP/MONTREAL/PQ H3C 3P8/CANADA/; SANDOZ CANADA  
INC/DORVAL/PQ H9R 4PS/CANADA/  
Journal: ANALYTICAL BIOCHEMISTRY, 1995, V230, N2 (SEP 20), P239-247  
ISSN: 0003-2697  
Language: ENGLISH Document Type: ARTICLE

Abstract: P-Glycoprotein is an integral membrane protein which mediates the energy-dependent efflux of various antitumor agents from multidrug-resistant cancer cells, \*\*\*\*Surface\*\*\*\* plasmon resonance was used for the detection of P-glycoprotein after solubilization from drug-resistant and drug-sensitive Chinese hamster ovary cells and for the \*\*\*\*analysis\*\*\*\* of its interaction with cyclosporin A, a competitive inhibitor of drug efflux. Detection of P-glycoprotein relied on its binding to the monoclonal \*\*\*\*antibody\*\*\*\* C219 which was \*\*\*\*immobilized\*\*\*\* on a sensor chip. Binding of Zwittergent 3-14-solubilized P-glycoprotein to the \*\*\*\*antibody\*\*\*\* was concentration-dependent and reflected the relative abundance of P-glycoprotein in both cell lines. It was abolished when C219 was omitted or replaced by a rabbit anti-mouse IgG \*\*\*\*antibody\*\*\*\* and considerably reduced after \*\*\*\*precipitation\*\*\*\* of P-glycoprotein with wheat germ agglutinin. Preincubation of solubilized proteins with cyclosporin A increased the amount of protein bound to the \*\*\*\*antibody\*\*\*\* by approximately 30%. These results indicate that \*\*\*\*surface\*\*\*\* plasmon resonance is well suited to the detection of P-glycoprotein from biological samples and shows promise as a tool for the study of its interaction with different drugs. (C) 1995 Academic Press, Inc.

36/7/11 (Item 5 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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03857908 Genuine Article#: QM072 Number of References: 28  
Title: THE MORPHOLOGY OF THE NORTH JOVIAN ULTRAVIOLET AURORA OBSERVED WITH  
THE HUBBLE-SPACE-TELESCOPE  
Author(s): GERARD JC; DOLS V; PRANGE R; PARESCE F  
Corporate Source: UNIV LIEGE, INST ASTROPHYS, PHYS ATMOSPHER & PLANETAIRE  
LAB/B-4000 LIEGE//BELGIUM/; INST ASTROPHYS/F-75014 PARIS//FRANCE/; INST  
ASTROPHYS SPATIALE/ORSAY//FRANCE/; SPACE TELESCOPE SCI  
Searched by Barb O'Bryen, STIC 308-4291

INST/BALTIMORE//MD/21218

Journal: PLANETARY AND SPACE SCIENCE, 1994, V42, N11 (NOV), P905-917

ISSN: 0032-0633

Language: ENGLISH Document Type: ARTICLE

Abstract: A series of six images covering a complete rotation of the north polar region of Jupiter were obtained in February 1993 with the Faint Object \*\*\*\*Camera\*\*\*\* on board the Hubble Space Telescope. These images provide the first global picture of the morphology of the Jovian ultraviolet aurora observed from Earth orbit. The \*\*\*\*camera\*\*\*\* passband was centered near 153 nm, a region dominated by the H-2 Lyman bands and continuum. The successive exposures, taken approximately 90 min apart, are used to construct a polar view of the auroral zone. It is found that the auroral emissions do not exactly follow the footprint of a constant L-shell although the size of the oval and its location agree best with the footprints of the similar or equal to 30 R(J) field line in the GSFC O-6 model of the Jovian \*\*\*\*magnetic\*\*\*\* field. The displacement between the observed auroral zone and the theoretical oval may indicate a possible distortion of the Jovian \*\*\*\*magnetic\*\*\*\* field lines near the \*\*\*\*surface\*\*\*\*. A comparison with two images at the same wavelength obtained 8 months earlier shows that the : main morphological features are persistent, in spite of changes in the detailed emission distribution. Small scale features with characteristic sizes of similar to 1000 km are observed along the auroral oval. The change of morphology observed as a function of the System III longitude appears as a persistent characteristic of the morphology of the north polar aurora.

36/7/12 (Item 6 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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03102728 Genuine Article#: NF078 Number of References: 18

Title: SIMULTANEOUS SCREENING OF FUMONISIN B-1, AFLATOXIN B-1, AND ZEARALENONE BY LINE IMMUNOBLOT - A COMPUTER-ASSISTED MULTIANALYTE \*\*\*\*ASSAY\*\*\*\* SYSTEM

Author(s): ABOUZIED MM; PESTKA JJ

Corporate Source: MICHIGAN STATE UNIV, DEPT FOOD SCI & HUMAN NUTR/E  
LANSING//MI/48824; MICHIGAN STATE UNIV, DEPT FOOD SCI & HUMAN NUTR/E  
LANSING//MI/48824

Journal: JOURNAL OF AOAC INTERNATIONAL, 1994, V77, N2 (MAR-APR), P495-501

ISSN: 1060-3271

Language: ENGLISH Document Type: ARTICLE

Abstract: A line immunoblot \*\*\*\*assay\*\*\*\* was developed for the simultaneous screening of fumonisin B-1 (FB1), aflatoxin B-1 (AFB(1)), and zearalenone (ZEA). Monoclonal \*\*\*\*antibodies\*\*\*\* for each of these toxins were \*\*\*\*immobilized\*\*\*\* as multiple lines on nitrocellulose membrane strips and sectorized into hydrophobic compartments to minimize use of reagents. A modified enzyme-linked immunosorbent \*\*\*\*assay\*\*\*\* was conducted whereby free mycotoxins and horseradish peroxidase-labeled mycotoxins competed for binding to the nitrocellulose-bound \*\*\*\*antibodies\*\*\*\*. Color intensity of lines formed by a \*\*\*\*precipitating\*\*\*\* substrate was inversely related to mycotoxin concentration. Detection limits for the individual mycotoxins, as determined by visually comparing the color intensity of positive strips to negative controls, were 500, 0.5, and 3 ng/mL for FB1, AB(1), and ZEA, respectively. Line density was \*\*\*\*quantitatively\*\*\*\* assessed also by using a \*\*\*\*camera\*\*\*\*, video monitor, and microcomputer equipped with a video-digitizing board. The \*\*\*\*assay\*\*\*\* could be used to determine range values for the various mycotoxins in extracts of spiked corn in less than 30 min, and values could be recorded on the microcomputer hard disk. This combination of  
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Choy, Joe  
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1994:263166



line immunoblot \*\*\*\*assay\*\*\*\* and image \*\*\*\*analysis\*\*\*\*, termed computer-assisted multianalyte \*\*\*\*assay\*\*\*\* system, should be applicable to the simultaneous screening of multiple mycotoxins and other agricultural residues in food.

36/7/13 (Item 7 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
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01412299 Genuine Article#: GX111 Number of References: 54  
Title: CHEMICAL SENSORS FOR ENVIRONMENTAL-ANALYSIS  
Author(s): NIESSNER R  
Corporate Source: TECH UNIV MUNICH, INST AQUEOUS CHEM & CHEM BALNEOL/W-8000  
MUNICH 2//GERMANY/  
Journal: TRAC-TRENDS IN ANALYTICAL CHEMISTRY, 1991, V10, N10 (NOV-DEC), P 310-316  
Language: ENGLISH Document Type: ARTICLE  
Abstract: Chemical sensors for environmental monitoring are under active development but at the moment are of only limited value. However some fiber-\*\*\*\*optical\*\*\*\* \*\*\*\*sensor\*\*\*\* systems combined with opto-electronics and lasers have the potential to fulfil the legal requirements in monitoring environmentally relevant analytes in the \*\*\*\*ppt\*\*\*\*-range. The principles of sensors, and new developments reported in the literature or from our own research are discussed.

